Austria	Sch. 18	Indonesia	Rp 2500	Portugal	Esc 80
Bahrain	Din 0.650	Italy	L 1300	S. Arabia	Rls 6.00
Belgium	BFr.38	Japan	Y550	Singapore	S$ 4.10
Canada	C$2.00	Jordan	Fils 500	Spain	Pta 110
Cyprus	C£0.60	Kuwait	Fils 500	Sri Lanka	Rup 30
Denmark	Dkr 7.25	Lebanon	£L 8.00	Sweden	Skr 6.50
Egypt	E£1.00	Luxembourg	LFr.38	Switzerland	SFr 2.20
Finland	Fmk 8.00	Malaysia	Rm 4.25	Taiwan	NT $85
France	Fr. 6.00	Mexico	Pes 300	Tunisia	Din 0.600
Germany	DM 2.20	Morocco	Dh 8.00	Turkey	L 210
Greece	Dr 70	Netherlands	Fl 2.50	U.A.E.	Dh 6.50
Hong Kong	HK$ 12	Norway	Nkr 6.00	U.S.A.	$1.50
India	Rup 15	Philippines	Pes 20		

FINANCIAL TIMES

EUROPE'S BUSINESS NEWSPAPER

No. 29,657 — Monday June 24 1985 — D 8523 B

European microchip industry: key to survival, Page 16

World news | Business summary

Expansion forecast for UK economy

The British economy is set for a strong performance this year, with inflation moderating after the summer months, according to forecasts by the Confederation of British Industry and the London Business School.

The CBI survey of manufacturing companies says that order books are still close to their strongest levels for eight years. The results indicated the economy would grow by 4 per cent this year.

This growth rate is significantly better than the Treasury was predicting in March and well ahead of the 3 per cent consensus of City of London forecasts. Page 18

Cyprus elections

Turkish Cypriots voted in parliamentary elections in a further attempt to consolidate their breakaway northern Cyprus state, recognised only by Turkey and condemned by the United Nations.

Presidential meeting

Italy's Christian Democrats, the country's dominant political party, met to choose their candidate to succeed President Sandro Pertini, a Socialist who does not intend to stand again. Former prime minister Francesco Cossiga is tipped to be the party's candidate. Page 3

Gandhi ultimatum

Indian Prime Minister Rajiv Gandhi sent a group of officials to riot-hit Gujanat state after giving the chief minister an ultimatum to stamp out violence that has killed nearly 200 people. He will lose his post if the situation is not brought under control.

S. Africa holds 15

South African police detained 15 people in connection with the activities of the outlawed African National Congress. The 10 men and five women were detained in Bhongolethu, a black township near Oudtshoorn.

Canary resignation

Jeronimo Saavedra, the head of the Socialist administration of the Canary Islands, resigned after the regional parliament rejected the terms of Spain's entry into the EEC.

Greek programme

Greek Socialist Prime Minister Andreas Papandreou unveiled his programme for the next four years which showed a marked toning down of radical rhetoric. Page 3

Chinese army cut

China is to spend 1bn yuan ($350m) resettling and re-employing the 1m troops to be cut from China's army. Page 2

Uganda attack

Anti-government guerrillas attacked Jinja, Uganda's second largest town.

Guards kill man

Yugoslav border guards shot a man running across the frontier into Austria and his body was found on Austrian soil.

London bomb found

A bomb was discovered in a crowded hotel in London just a few hundred yards from Buckingham Palace.

Bishops condemn

Poland's Roman Catholic bishops condemned what they said was persecution of people who held independent political views and criticised the imprisonment of a priest who opposed removal of crosses from classrooms.

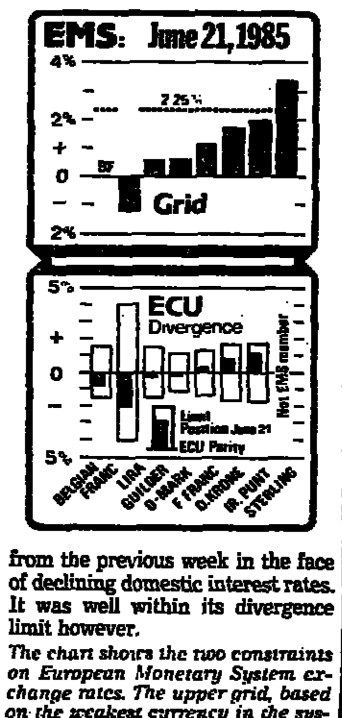
Editor freed

The editor of Nigeria's Daily Times, called in by the security police on Friday, has been released. The military authorities introduced a tough press law last year setting jail terms for reports deemed to be inaccurate.

Pritzker in $400m tobacco acquisition

PRITZKER family of Chicago, one of the leading private investment groups in the U.S. is to pay $400m for Conwood, a major U.S. producer of smokeless tobacco products. Page 18

EUROPEAN MONETARY SYSTEM: Currencies were mostly weaker last week in relation to central rates, the notable exception being the D-Mark. This trend developed as the U.S. dollar lost ground, prompting traders to switch into other currencies and the D-Mark attracted a greater part of the funds compared with other member currencies. The Belgian franc remained the weakest member and failed to show any improvement from the previous week in the face of declining domestic interest rates. It was well within its divergence limit however.



The chart shows the two constraints on European Monetary System exchange rates. The upper grid, based on the weakest currency in the system, defines the cross rates from which no currency (except the lira) may move more than 2¼ per cent. The lower chart gives each currency's divergence from its "central rate" against the European Currency Unit (ECU), itself a basket of European currencies.

REAGAN administration has come out strongly against the textile and apparel quota legislation now being considered in Congress. Page 4

FRANCE has made available a FFr 2bn ($213.4m) line of credit to Mexico to finance equipment purchases. Page 4

PRIVATE sector companies in Britain spend an average on training of only £200 (£252) per employee, according to a Manpower Services Commission Survey. Page 6

BAXTER Travenol Laboratories, U.S. health products group, has suggested a counter-bid worth more than $3.5bn for American Hospital Supply, which is involved in a proposed merger with Hospital Corporation of America. Page 18

BANCA del Gottardo of Switzerland is offering 80,000 bearer shares worth around SwFr 37m ($14.6m) for sale in the Euromarkets through a group on banks led by Swiss Bank Corporation. Page 19

BANK of Finland, the country's central bank, has banned with effect from today foreign sales of quoted bonds to shelter domestic monetary policy from a strong influx of funds from abroad. Page 19

BEATRICE Companies, the Chicago-based food and consumer products group, suffered a 20 per cent decline in first quarter earnings to $58m. Page 19

SHELL OIL, part of the Royal Dutch/Shell group, signed a letter of intent to buy more than 400 U.S. petrol stations from Atlantic Richfield, the U.S. oil company. Terms of the deal were not disclosed. Page 22

FIRST PHILIPPINE HOLDINGS, a Philippine group with industrial and engineering interests, plans further asset sales to pay off its debts of about 700m pesos ($37m). Page 19

BANK BUMIPUTRA, the Malaysian bank, reported an operating loss of 105m ringgit ($43) for the year ended December 1984. Page 22

Air India Jumbo jet crash kills 325 after mid-air 'explosion'

THERE were some suspicions late last night that the crash of on Air India Jumbo jet off the Irish coast yesterday may have been caused by a terrorist bomb. All 325 passengers and crew aboard were killed, write **Lynton McLain in London, Bernard Simon in Toronto, and John Elliott in New Delhi.**

The aircraft was en route from Toronto and Montreal, via London, to Bombay. It came down off the south-western coast of Ireland, only eight minutes after the pilot had routinely reported to Shannon air traffic control and had given no indication of anything amiss.

The aircraft was only about 45 minutes' flying time from Heathrow, where it was due to refuel and offload airline personnel. It was running nearly two hours late and should have landed in London some time before it plunged into the Atlantic.

The Canadian authorities last night were urgently trying to determine if there is a link between the Air India crash and a bomb blast in Tokyo involving baggage from a Canadian Pacific flight from Vancouver. The incidents were less than an hour apart. Two baggage handlers were killed and three injured.

The Air India Jumbo crash was the world's third worst air disaster and the worst involving an airborne 747 jet since the airliner was introduced 16 years ago. Grieving relatives besieged offices of Air India in Bombay as news of the tragedy spread.

The only time more people have been killed in the air in a single aircraft accident was in March 1974, when a Turkish Airlines' DC-10 from Paris to London crashed with 345 people on board. But 582 were killed in Tenerife in 1977 when two Jumbo jets collided on the runway.

The suspicions of a terrorist attack were initially strengthened by statements from the Montreal airport security authorities that three suspect bags, detected by sniffer dogs and metal detectors, had been removed from the Air India Jumbo at Montreal before take-off. But the authorities said last night they could find no traces of guns or explosives in the cases.

Following the crash, security officers from world airlines have been called to an emergency meeting at the headquarters of the International Air Transport Association (IATA) in Montreal, probably next week.

The meeting of the IATA security advisory committee is expected to concentrate on ways of tightening the monitoring of baggage and cargo as well as passengers, "because of recent circumstances," IATA said in Geneva. IATA is concerned about a "copycat syndrome" of growing attacks on civil airliners.

The Air India Jumoo jet disaster is likely to have a serious impact on the world insurance market. The replacement value of a Boeing 747 is between $96m and $104m and there are likely to be substantial personal insurance claims.

The insurance risks are understood to have been spread through the world insurance market, but the London market, based on Lloyds is likely to bear part of the risk, either directly or through reinsurance.

The circumstances of the crash point strongly to a catastrophic event in the air, either an explosion or a failure of the aircraft structure.

In New Delhi, Mr Ashok Ghelot, the Indian Minister of State for Civil Aviation, said: "An explosion is considered to be the cause of the Air India 747 jet crash near Ireland."

The Air India Jumbo is the 12th Boeing 474 to have been destroyed in the air or on the ground. Boeing was confident last night that its design was not to blame for the crash. The company said: "We have never had any 747 crash that has questioned the design or structure of the aircraft."

The speculation that the explosion was caused by a terrorist bomb was heightened yesterday morning only a few hours after the crash, when Air India said in Canada that it had been threatened with hijacks in recent months.

Mr Francis Degama, the Air India regional director for the UK, told a press conference in London: "We have had over the past few months threats of hijack, and there have been threats of this nature in the past. We have had some from Indian groups, all political." However, no threats are understood to have been received in Canada in the past two weeks.

The Air India Jumbo jet, flight number AI 182, disappeared without warning from radar screens at Shannon airport at 7.15am GMT

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Israel to free 31 Shia prisoners as 'goodwill gesture'

BY DAVID LENNON IN TEL AVIV, TONY WALKER IN BEIRUT AND REGINALD DALE IN WASHINGTON

ISRAEL is to release immediately 31 Lebanese Shia prisoners as a goodwill gesture towards the hijackers in Beirut. They have demanded that Israel frees over 700 Shia detainees in exchange for the 40 or so American hostages taken more than a week ago from a TWA airliner.

A senior Israeli official said this was part of the overall plan gradually to release the Shias. "If the hijackers want to see this as a goodwill gesture, well let them," he added.

A spokesman for Amal, the Shia militia which has accepted responsibility for the safety of the hostages, said in Beirut it had no plans to release any of the American hostages in response to the Israeli decision.

Mr Nabih Berri, the leader of Amal, said later on U.S. television that he saw no connection between what he was asking for and the release of the 31 detainees.

In response to a question, he said that if he was to order the release of the 31 hostages directly under Amal control he did not know what would happen to the other Americans. He thought they would be in increased danger and could even be killed because such an action by Amal would break the link with the hijackers.

Since the hijackers' demands were issued, Israel has refused to free any of the Shias who it had taken prisoner in southern Lebanon and transferred to Atlit prison near Haifa. To do so, the Israeli Government said, would be to give in to blackmail.

However, Jerusalem has been under increasing pressure from public opinion in the U.S. to release the Shias, who were never charged with any offence and whose transfer to Israel is regarded in international law as illegal.

In Washington Mr George Shultz, the U.S. Secretary of State, stressed that there was "no connection" between the American hostages and Israel's decision to release some detainees. Israel would have to decide for itself what to do with its prisoners, Mr Shultz said, adding that "presumably" further releases could take place.

Mr Shimon Peres, the Israeli Prime Minister, said on American TV that the decision to release the 31 Shias had been taken a few weeks ago and had since been passing through Isreal's legislative process.

Under Israeli law every detainee had the right of appeal to a special committee and if the committee recommended release, the Government had to comply. "We have had to do it," he said on the NBC programme "Meet the Press."

The Israeli cabinet yesterday discussed the latest development in the hostage affair. No details were made public but it is assumed that the cabinet approved the gesture of liberating a small number of the detainees.

Earlier M Pierre Aubert, the Swiss Foreign Minister, passed a message from Mr Berri to Jerusalem via the Israeli ambassador in Berne.

Israeli officials said that the Foreign Minister's telephone conversation with Ambassador Yohanan Meroz was "vague" and that there was "nothing operational, nothing specific" in what the Foreign Minister had to say.

In Beirut, Amal officials have been considering a possible framework agreement for the release of the hostages that would allow a face-saving deal with the U.S.

Mr Berri is understood to have discussed with a West European ambassador an arrangement that might satisfy U.S. objections to dealing directly with groups involved in the hijacking. But diplomats caution there is little or no movement towards an agreement that would end the crisis.

There are reports that a small group of passengers, including those with "Jewish-sounding names" and holders of military or diplomatic passports, who are not under direct Amal control, may have been moved out of Beirut.

The original hijackers, believed to include members of the extremist pro-Iranian Hezbollah (party of God) are understood to have these Americans in their custody as insurance against a premature deal with the U.S.

Akef Haidar, chief of Amal's politburo, has given assurances that all American hostages are well, but indicated his more moderate group would disengage itself from the affair if no progress was made.

EEC plan to close gap in technology

By Quentin Peel in Brussels

THE EUROPEAN Commission will today outline its proposals for a European research strategy to close the widening technology gap with the U.S. and Japan.

The plans are to be presented to EEC heads of government at their summit in Milan at the end of the week, as a complement to the French Government's proposals for the co-operation programme known as Eureka. Both ideas are seen as responses to the U.S. Strategic Defence Initiative (SDI), the so-called star wars programme, which Commission officials fear threatens to widen the gap between U.S. and European research in key areas of high technology.

The Commission will be putting forward its ideas to retain the research effort under the umbrella of the European Community, even if plans are drawn up to allow flexible participation in individual schemes by the different member states, sometimes excluding some members, and on other occasions including non-EEC European countries.

M Jacques Delors, the Commission president, told members of the European Parliament last week that he was ready to present a draft treaty to the Milan summit, along the lines of the Euratom Treaty setting up the European Atomic Energy Community, to provide the institutional framework for the efforts.

The Commission's plan is to double spending on specifically Community research programmes over the next three years, although this is regarded with some suspicion by those member states, like

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Can Europe catch up? Page 16

Murdoch left to buy full control of Metromedia

BY TERRY DODSWORTH IN NEW YORK

MR RUPERT Murdoch, the Australian-born publisher, is to become the sole owner of the six Metromedia television stations he recently acquired in the U.S. in co-operation with Mr Marvin Davis, the Denver oil billionaire.

In an abrupt turnround, the two men said over the weekend that Mr Davis was pulling out of the $2bn deal, which they tied up just six weeks ago. The reversal will leave Mr Murdoch to fund the acquisition alone, while giving him total control over the running of the stations.

Neither Mr Murdoch nor Mr Davis was available for comment on this unexpected change of heart, but in a joint statement they said that Mr Davis intended to "concentrate on the development" of other investments, including 20th Century-Fox Film, of which he is co-owner with Mr Murdoch.

Analysts in New York suggested that one reason for Mr Davis's decision may have been growing concern over the price of the Metromedia stations at a time when his chief investments are suffering from the depressed state of the oil industry.

The main elements of the television deal were all negotiated by Mr Murdoch, and broadcasting experts are virtually unanimous in the belief that he paid right at the top end of the price range for the stations.

An offical for Mr Murdoch said he will have no problem in funding the acquisition, which is structured as a $650m cash offer plus the assumption of $1.35bn in debt already held by Metromedia for a total of seven stations. One of these, WCVB-TV in Boston, is to be sold to the Hearst Corporation for $450m, to reduce the cash element of the deal.

Despite Mr Murdoch's reputation for cost cutting, however, analysts remain sceptical over the ability of the other stations to generate sufficient returns to service the assumed debt, while providing a reasonable return on investment.

Other broadcasting experts believe that Mr Murdoch was always interested in gaining sole ownership of the stations for himself. They noted that he usually makes radical changes in the companies he takes over, and that he has often commented that he needs full control of them to follow through this policy.

Mr Murdoch made windfall gains of around $90m in the U.S. last year when he was bought out of large shareholdings in both the Saint Regis paper company and Warner Communications, the entertainments group.

Only last week, he also raised $55m through the sale of the Village Voice, the New York magazine. But set against these cash-raising deals, he splashed out $250m on the acquisition of his half share in 20th Century-Fox earlier this year.

Speculation on the future of Mr Murdoch's U.S. business now centres on the approach he will take to balancing the new portfolio of television activities against his newspaper interests.

On the television side, he is believed to be aiming to develop a fourth national television channel capable of challenging the major networks by integrating the production facilities of Fox with the six stations

Nine foreign banks win entry to Japan

BY CARLA RAPOPORT IN TOKYO

JAPAN has decided to approve the applications of all nine foreign banks seeking trust banking licenses – an unexpected move designed to ease some of the trade friction between the U.S. and Japan.

Mr Noboru Takeshita, Japan's Finance Minister, announced the move at the weekend, following talks with Mr James Baker, the U.S. Treasury Secretary. During the last six months, Japan has maintained that it would grant only eight trust bank licenses to foreign banks as Japan has only eight trust banks itself.

Japan's trust banks, which engage in commercial banking as well as investment trust management, account for more than 65 per cent of Japan's corporate pension market. Although small by U.S. standards at just Y14,000bn ($56.38bn), Japan's pensions market is expected to grow by 20 per cent a year over the next 10 years as the number of pensioners swells.

The nine foreign banks include six from the U.S., two from Switzerland and Barclays Bank of Britain. The U.S. banks are Morgan Guaranty Trust, Bankers Trust, Chase Manhattan, Manufacturers Hanover Trust, Citibank and Chemical Bank. The two Swiss banks are Credit Suisse and Union Bank of Switzerland.

At the same time, Mr Takeshita told Mr Baker that Japan is aiming to expand the Tokyo Stock Exchange's membership quota beyond the current 83 "as soon as possible." The lack of foreign membership on the exchange is another sore point between the U.S. and Japan.

The concessions on allowing all the applicants into the trust banking business represents one of the few bright spots in recent U.S. Japan trade talks. Claims by the U.S. that Japan's semiconductor industry is selling its products in the U.S. below cost has fallen on deaf ears in Japan. At the same time, calls for reductions on tariffs on U.S. agricultural products have been effectively vetoed by the Agriculture Ministry.

If one of the nine applicants had been eliminated, it most likely would have been one of the six U.S. banks, out of fairness to the three Europeans. The nine applicants, which expect to begin operations by the end of the year, now face stiff competition from the local trust banks which enjoy strong links with their customers and a developed branch network.

Probe into UK export backing

By Christian Tyler in London

THE BRITISH Government is reviewing its aid and trade provision (ATP) after complaints from big exporting companies that they are losing contracts in the Third World because of more generous loan subsidies by other governments.

Ministers are already preparing to extend soft credit to China to match competition from Japan, France and other West European countries supporting their domestic industries in that fast-moving market.

But the review, by a committee drawn from several government departments, is expected to range much more widely.

The aid and trade budget has an approximate ceiling of £50-£60m ($63m-$75.6m) a year and is part of the bilateral aid programme run by the Overseas Development Administration. It is used to sweeten loan terms in order to defend British bidders against so-called "predatory financing" by rivals.

It is extended mainly to former Commonwealth countries, especially India, or others with which Britain has traditional links.

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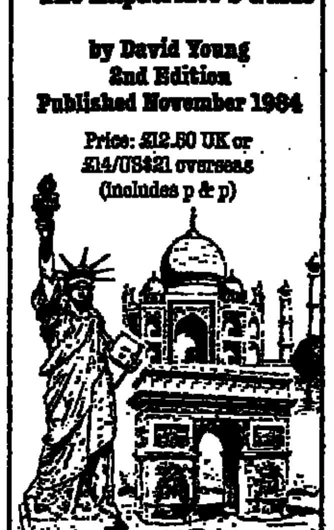
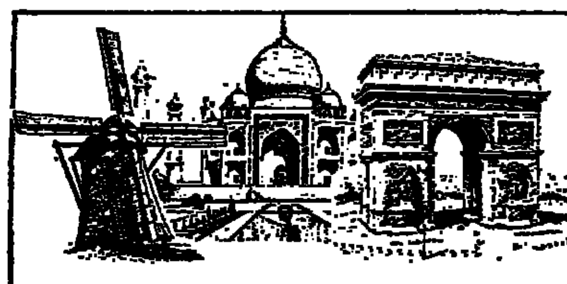
OVERSEAS NEWS





Sri Lanka says end in sight to Tamil crisis

By John Elliott in New Delhi

SRI LANKA hopes that by the end of this year it will have solved the claims of its minority Tamil community and, with the help of India, stopped permanently the tide of violence which has seriously damaged the island in the past two years.

"Come what may, support or opposition, before the end of this year I hope to see an end to the plague that has harmed this country and its people for several years," Mr Junius Jayawardene, Sri Lanka's President, told a meeting of the country's main Buddhist religion yesterday.

Referring to Mr Rajiv Gandhi, Indian Prime Minister, he said: "With his help *we can begin more vigorously to control terrorism in our country."*

Mr Jayawardene's optimistic and tough remarks come at the end of a week during which a ceasefire was introduced following a summit meeting he had with Mr Gandhi in New Delhi three weeks ago.

Both Tamil extremists based in the southern Indian city of Madras, and the Sri Lankan security forces have avoided any violence.

Several extremist Tamil leaders were reluctant a week ago to agree to a ceasefire but were persuaded to do so by the Indian Government. They are now saying they are willing to be involved for the first time in peace talks with the Sri Lankan Government.

Mr Jayawardene is relying heavily on India to keep the extremists in line

Although it may cause him political problems in his southern state of Tamil Nadu, where Madras is the state capital, Mr Gandhi has shown himself to be more neutral on the issue of the Tamils and the Sri Lankan Sinhalese majority community than his late mother

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Brazil leaders suffer lack of direction after first 100 days

BY ANDREW WHITLEY IN RIO DE JANERIO

THE DEMOCRATIC Alliance Government in Brazil, headed by President Jose Sarney, marked its first 100 days in office this weekend amid a growing sense of drift and uncertainty.

Gone are the high hopes of March when the military voluntarily surrendered power after 21 years.

In place of the perhaps unrealistic expectations of radical change and restoration of eroded living standards there is a heightened awareness of the temporary, transitional nature of the Sarney Government.

A recent remark by Sr Sarney, made in frustration to a colleague—"nobody obeys me"—told volumes. Worse it was accurate.

The Congress goes its own way, concerned more with party infighting than with the legislative tasks before it; while the government remains split between ministers associated with the previous regime and those attempting to steer Brazil in a new direction.

Last Friday, in an attempt to bolster his standing with Congress, President Sarney told a group of anxious left-wing congressmen that whatever commitments the late Senor Tancredo Neves, the president who was not sworn in, may have had with the International Monetary Fund, he himself had none. "I will play tough," he is reported to have declared.

In the absence of any discernible alternative strategy the remarks rang hollow. Like it or not, the president knows he has to make heavy cuts in public spending this year and—although the details of this are yet to be spelt out—increase the tax burden, if Brazil is to avoid the agonies Argentina has suffered over the past two years.

On the economic front, the civilian Government can point to some modest achievement. Price controls have helped to break inflationary expectations, bringing the annual rate down to about 225 per cent, against widespread earlier fears that it could have exploded this year to more than 400 per cent.

These controls have nevertheless disgruntled many industrialists, already complaining about the greater degree of uncertainty now than in the last, ineffective year of the Figueredo government.

At the central bank, the orthodox monetarist policies of Sr Antonio Carlos Lemgruber appear to be working in taming money supply growth. What is lacking so far is the swinging of the axe against the hundreds of major state utilities and companies which grew so far and independent under the military.

The public reaction would probably be stronger by now if the Mengele affair and the recent successes of the national football team had not distracted attention from the Government's vacillation.

Argentina to pay $320m debt interest this week

BY PETER MONTAGNON

ARGENTINA WILL this week pay a further $320m (£254m) in overdue interest with creditor banks, bringing payments up to date through February 28.

The payment has been made possible by the $483m bridging loan granted to Argentina by the U.S. and 11 other countries last week. It is designed to protect the country from seeing its debt downgraded to "value-impaired" by the U.S. authorities, a move which would force U.S. banks to set up expensive loan-loss provisions.

A committee of U.S. bank regulators responsible for monitoring foreign countries' debts decided at a meeting last week to defer any further decision on Argentina until October. By then, however, President Raul Alfonsin's government should have completed a major rescheduling package with its bank creditors.

Legal documents on this package are to be sent to creditor banks world-wide this week in spite of the fact that commitments to the $4.2bn credit, which is a pivotal part of the rescue scheme, are still $40m short of the targeted total.

● Colombia will begin this week to seek support for a $1bn (£793m) loan agreed with its 14 bank consultative committee, the Finance Ministry said.

It revealed in a communique the loan's repayment terms which had been partly disclosed in New York last week.

● The Peruvian Government yesterday rejected a Cuban call for Latin American countries to stop payments on the region's $360bn (£285bn) foreign debt.

Peking to use $350m for troop resettlement

By Robert Thomson in Peking

THE CHINESE Government announced yesterday that Yuan 1bn (about $350m) will be spent resettling and re-employing the 1m troops to be cut from China's army.

Chinese leaders have indicated that the country would be better served with those 1m soldiers in civilian service, and that the money eventually saved from the mass demobilisation will aid the economy.

The troop cuts are also part of the leadership's strategy to streamline and modernise the People's Liberation Army, which Mr Deng Xiaoping, the Chinese leader, has called "bloated." When the reduction is complete, the PLA will have 3m troops.

Stories have already appeared in the Chinese media lauding the usefulness of recently demobilised soldiers. In Peking, former soldiers have been employed as drivers, factory workers and cooks.

In announcing the cost of resettlement, Mr Cui Naifu, Minister for Civil Affairs, said the pruning of the military is a "glorious task" which needs the combined efforts of many departments.

Mr Cui's ministry will handle the resettlement of about 100,000 officers and 400,000 soldiers, while the remaining troops to be shed will be employed through the labour departments of central and provincial governments.

A concern of senior officers is that their demobilisation will lead to a loss of prestige through being given lowly civilian positions. To allay their fears, the Chinese media has reported numerous cases of senior officers taking "leading positions" in their new work units.

Two clubs for retired officers have been built in Peking, and municipal authorities have constructed a rest home for retired military men at Beidaihe, a popular beach resort

The demobilisation was announced unexpectedly by Mr Hu Yaobang, the Chinese general-secretary, while in New Zealand on his April tour of the South Pacific.

● China's national airline, CAAC, said yesterday it could not keep pace with rising demand, despite investing heavily in new planes, and would need at least two years to complete its planned reorganisation, Reuter reports from Peking.

The airline said that in the first five months of 1985 the airline had carried 60 per cent more traffic than in the same period last year due to China's tourist boom and Peking's drive to open up the economy.

Keating flirts with fresh dangers

BY MICHAEL THOMPSON-NOEL IN SYDNEY

LIKE THE White Rabbit in Lewis Carroll's stories, Mr Paul Keating, the Australian Treasurer (finance minister), always appears in a powerful hurry.

Apart from sweeping reform of the financial system Mr Keating is best known in Australia for his avid collecting of Napoleonic clocks. "Stick to the First Emipre," he once said, "and you'l never make a financial mistake. Of course, you'll never learn anything new or interesting, either."

Recently, Mr Keating has had scant time to wind them up, for he has ben criss-crossing Australia, pocket watch in hand, in an attempt to conjure up support for the most ambitious initiative of his hectic reign to date: wholesale reform of Australia's tax system.

On any analysis, the political perils inherent in the Keating tax plan are so grave that tax reform is now viewed as the issue that will make or break Mr Bob Hawke's Labor Government in Canberra, of which Mr Keating, so far, has been the brightest star.

The timetable goes like this. On July 1 Mr Hawke hosts a "tax summit" of interested parties in Canberra which has already been dubbed one of the Prime Minister's sillier ideas. In theory, the summit will discuss the White Paper on tax reform published by the Government on June 4; in practice, it may well develop into an eisteddfod of whinging and special pleading.

> The perils of Keating's tax plan are so grave that some believe it may make or break Hawke's Government

This week, the brewers claimed that beer prices would rocket as a result of the proposed 12.5 per cent consumption tax (similar to VAT): Mr Keating said the claim was rubbish. But more insidious charges will ultimately be unleashed, partly because the White Paper envisages not only a switch of emphasis from direct to indirect tax, but also a war on "lurks and perks" (fringe benefits), and on tax shelters like gold mining and film production. (Foreign critics who faint at the occasional macho Aussie film hit obviously have not seen the *tripe in which the industry now* specialises).

Mr Keating will not be distracted by these charges: he is in too great a hurry. The son of a boilermaker, he left school at 14, and joined the Labor Party that year. He entered Parliament in 1969, when he was noted for a tendency to call people "coves," and rose swiftly. He served briefly as a minister in the Whitlam Government that was sacked by the then Governor-General, Sir John Kerr in late 1975.

His reign as Treasurer has been marked by whirlwind activity: floating the dollar, liberalising the financial markets, and insisting that as many as 16 foreign banks be ushered in.

I once saw him wearing a string vest, but his appearance now—silk ties, expensive suits, and very cold eyes—makes him indistinguishable from the bankers and mining barons with whom he mixes so easily. January 18 was his 41st birthday.

OVERSEAS NEWS

NZ dollar continues to make sharp gains

By Dai Hayward in Wellington

THE NEW ZEALAND dollar has again proved its strength in the world currency markets rising strongly last week against sterling as well as the U.S. and Australian dollars.

In a dramatic mid-week move it jumped a full two cents in value against the U.S. dollar — the second time in the past two months is has risen two cents in 24 hours.

Foreign exchange dealers and financial operators who predicted a sharp decline in the value of the NZ dollar after it was floated in March have been proved wrong. Now some are confidently predicting it will hold firm and possibly even rise higher.

The NZ dollar improved against sterling from 0.3567 to 0.3613 on Thursday the day of its major upward move.

It rose to U.S.$0.47—just fractionally below its pre-float level of $0.47.3. This is well above the $0.42 level which many in the currency markets were predicting would be the level after the March float.

On Thursday it also rose more than one cent against the Australian dollar to reach A$0.707.

The Kiwi dollar has gained against European currencies which have themselves been rising. It rose against the German mark from 1.39 to 1.41 on Thursday and on Friday was DM 1.43 and £0.365.

When the dollar was floated in March the NZ Reserve Bank index was 62.7. On Thursday the index touched 63.4. It slipped back to 63.3 at the close on Friday but this was still above the pre-float level.

Initially it was said speculators and exporters who had moved funds offshore anticipating a drop in the dollar had to bring these back and this helped to maintain its value. It was suggested that when this demand was satisfied the NZ dollar would slide down.

This did not happen and now other reasons for the firmness of the NZ dollar are being suggested. The declines in the U.S. and Australian dollars has helped the NZ dollar

The NZ budget reassured overseas operators the NZ economy is improving with a substantial reduction in the government deficit.

Papandreou tones down Left rhetoric in policy speech

BY ANDRIANA IERODIACONOU IN ATHENS

GREECE'S SOCIALIST Prime Minister unveiled on Saturday a policy programme for the next four years, which showed a marked toning down of radical Left rhetoric, without however abandoning a commitment to social welfare oriented economics and a foreign policy of pacifist neutralism.

Dr Andreas Papandreou, who told the parliament that the programme represented a blend of his party's 1974 founding charter and the "experience of four years in government" kept his options open on the critical issue of the future of the four U.S. military bases in Greece.

He said his Government was "bound towards the parliament and the people to abide by the terms and the timetable of the agreement on the bases." This was judged by diplomats to be a Delphic statement given that the terms of the five-year bases agreement signed in 1983 include a termination option, the exercise of which however is not obligatory.

Dr Papandreou warned that the policy of boycotting exercises in the Aegean and deadlocked projects such as the setting up of a new Alliance command headquarters in Greece, would remain on the table as long as the Greek-Turkish dispute which underlined them were not resolved by Nato in such a way as to respect Greek "sovereign rights."

Dr Papandreou said that Athens would continue to link the start of a dialogue with Turkey, to the withdrawal of Turkish occupation troops from North Cyprus, as well as on Ankara's willingness to abide by the legal status quo in the Aegean.

The clearest shift in foreign policy compared to 1981, when the Socialists came to power, was on Greek-European Community relations. Then the Socialists pledged to pull-out pending a referendum. Now Dr Papandreou has indicated that Greece is in the Community to stay, while continuing to fight for economic convergence between poor and rich member states.

On the economic front, the Prime Minister gave no indication that a French Socialist style U-turn in favour of belt tightening was in the offing.

He stressed that his government's approach to tackling inflation, which has been in double figures since the early 1980s, and high current account deficit must be gradual, in order to avoid "throwing the burdens of adjustment one-sidedly on to the workers."

However, Dr Papandreou warned that Greeks must strive for higher productivity in all sectors.

He hinted that an increase in taxation might be inevitable, and allowed the government some room for manoeuvre on wage policy. He promised that some kind of index-linking system would continue to be followed, but said that criteria such as productivity and foreign competitiveness must be taken into account in setting wage policy.

Bulgaria warns troops of 'spy in the sky' satellites

BY LESLIE COLITT IN BERLIN

BULGARIA has warned its troops that the widespread use of computers in the armed forces will increasingly make them a target for Western "spy in the sky" satellites gathering Warsaw Pact military data.

The Bulgarian army newspaper Narodna Armiya noted that computers are to be introduced on a "mass scale" in the headquarters of Bulgarian army staffs, in various command links and in combat training facilities. This it said will greatly increase a possible "leakage" of military secrets.

The newspaper explained that the "enemy," using "technical equipment in space" can acquire large amounts of important information in a short time.

Cossiga expected to win presidency

By James Buxton in Rome

ITALY'S Parliament this evening meets to elect a new President of the Republic. he is widely expected to be Sig Francesco Cossiga, the Christian Democrat president of the Senate.

Some commentators are saying that the successor to 88 year-old Sig Sandro Pertini could be elected on the first ballot – something that has not happened in presidential elections since the first one in 1946.

Last night Christian Democrat MPs were meeting and were expected to formalise their choice of Sig Cossiga as candidate.

Already Sig Ciraco De Mita, the party leader, has received indications both from the other parties of the ruling coalition – the Socialists, Republicans, Social Democrats and Liberals – and from the Communists, that they are prepared to approve the choice of Sig Cossiga.

A last-minute hitch cannot be ruled out however, and it is not certain that Sig Cossiga will be elected on the first ballot. For the first three ballots a two-thirds majority of MPs from both Houses of Parliament plus representatives of the region is needed and then only an absolute majority is required.

Canaries chief resignation

LAS PALMAS, Canary Islands – The head of the Socialist Government of the Canary Islands has resigned after opposition groups rejected the terms of Spain's entry into the EEC, officials said yesterday.

Sr Jeronimo Saavedra,esigned after the regional parliament voted 30–27 against the accession treaty signed in Madrid on June 12 on the grounds that it would seriously damage the islands' economy.

Tens of thousands of farmers in the Canary Islands, which are part of Spain, have protested in recent months, saying their livelihoods would be harmed under the conditions negotiated for the Canaries.

The deal allows the islands to preserve their free port status and other fiscal privileges but treats their rich market produce as if it came from a non-Community country. Reuter

Greens fail to heal rift in accord with Social Democrats

BY PETER BRUCE IN BONN

WEST GERMANY's radical Greens Party, struggling to recapture public favour after heavy defeats in two important state elections this year, failed yesterday to heal a fundamental split over whether the party should commit itself to a coalition with the opposition Social Democrats (SPD) if the two groups were able to form the next government.

Some 700 Green delegates called to an extraordinary congress in Hagen, south of Dortmund, at the weekend, rejected motions calling for a commitment to coalition with the SPD and another rejecting co-operation in forming such an alliance.

Failure to clarify the party's position could threaten its chances in further state elections next year and the federal poll in 1987. The Greens have a small representation in parliament and their only real hope of winning cabinet seats would be as junior partners in an SPD government. The SPD, however, has startled many leading Greens not only by thrashing them in the recent Saarland and North Rhine Westphalia elections, but by also successfully usurping a number of popular Green platforms.

The Hagen conference, designed to settle the feuding within the party over SPD co-operation in the wake of the two defeats, achieved little more than the compromise reached by the party at its last federal congress in Hamburg last December when its political stock appeared to be riding high. Delegates then decided to keep the coalition question open.

Yesterday's debate ended with two resolutions being adopted, one which called on the Greens not to voluntarily isolate themselves in parliamentary opposition and another insisting that they co-operate with the SPD only when that party makes significant changes to its economic and defence platforms. The SPD, however, is enjoying a strong recovery in public support at the moment, and is unlikely to want to bend to the Green demands.

The defeat suffered by the Greens in North Rhine Westphalia last month has been particularly difficult to swallow. The state is the most populous in the country and also the most heavily industrialised which should have made it ideal territory for the Greens' environmentalist policies. Instead, they failed to win a place in the state parliament.

The defeat significantly hardened divisions in the party, with pragmatists, the so-called "realos," arguing even louder than usual that the Greens need to decide whether they seriously want to enter government or remain a pressure group. They have been accused by party purists, "fundamentalos," of wanting to sell out to the SPD.

The results of the weekend conference in Hagen were greeted enthusiastically by the purists, who argued that the compromise resolutions give the party time to heal divisions before the federal election.

Pope blocks closer Polish link

BY OUR ROME CORRESPONDENT

THE POPE has allowed his fellow Pole Mr Stefan Olszowski, the Foreign Minister, to feel the weight of his disapproval for the Polish Government's domestic policies.

A meeting between the two men in Rome on Saturday was widely reported to have been cool.

The Pope is understood to have made clear that he has no intention at this stage of acceding to Polish requests to raise the status of Poland's ties with the Vatican to those of full diplomatic relations.

Pope John Paul is understood to have indicated his dismay at the recent sentences given to the three Solidarity activists in Gdansk, and to the decision to try seven more Solidarity members in Katowice.

Behind the coolness is the Vatican's disapproval of the way the Government of General Jaruzelski treats the Catholic Church in Poland. A particular point at issue is the question of who – the Church or the Government – should decide how to distribute funds collected by Western churches for the benefit of Polish farmers.

To show his disapproval of the Gdansk sentences Sig Bettino Craxi, the Italian Prime Minister, refused to meet Mr Olszowski.

WORLD TRADE NEWS

Paris signs FFr 2bn line of credit deal with Mexico

BY DAVID HOUSEGO IN PARIS

FRANCE has made available a FFr 2bn (£168m) line of credit to Mexico to finance equipment purchases.

A protocal to this effect was signed during the visit to Paris last week of President Miguel de la Madrid of Mexico. Nine letters of intent with French groups covering major contracts were signed at the same time.

Among the potential contracts are a FFr 381m agreement for the extension of the Mexico City underground, a FFr 700m purchase of two bulk containers and a FFr 400m deal for two tug boats.

The agreements come at a time when France's trade deficit with Mexico has widened because increased French purchases of crude oil have not *been offset by larger Mexican* equipment purchases from France.

France imported FFr 7.2bn goods from Mexico last year (of which 80 per cent were oil) while exporting FFr 2.4bn. This was substantially below the FFr 3.6bn France exported in 1983.

M Hector Hernandez, the Mexican Minister of Commerce indicated to Mme Edith Cresson, the French Industry Minister, that Mexico wanted to reduce the imbalance.

Among other major negotiations going on are talks with CIT—Alcatel over the modernising of the Mexican telephone network and with Airbus-Industria over the possible purchases of Airbuses.

India expects oil export earnings to drop sharply

BY JOHN ELLIOTT IN NEW DELHI

INDIA's oil exports are expected to decline sharply from Rs18.2bn (£1.2bn) to Rs4.7bn in the current financial year 1985-86 because of increased oil refinery capacity being introduced in the country to process oil from the Bombay High.

The country's oil refining capacity has fallen behind the rapid expansion of its domestic oil production, which totalled 30m tonnes last year, and for the past four years some unrefined oil has had to be exported. Last year the U.S. took most of the exports, totalling some 7m tonnes.

Refinery capacity is expected to increase from about 35m tonnes last year to 42.1m tonnes this year, causing the cut in exports

Despite this drop in export earnings, however, the Indian Government has set a target for the country's total exports to grow by 3.8 per cent from Rs113bn last year to Rs117.4bn in the curent year, Mr Vishwanath Pratap Singh, Finance and Commerce Minister, announced at the weekend.

Non-oil exports will have to grow by 18.8 per cent above last year's total of Rs 94bn to achieve this target.

Last Monday, India announced that it had reduced its trade gap in 1984-85 to Rs 51.9bn from Rs 59.5bn in 1983-84.

Mr Singh also announced new initiatives to boost exports of computer software, engineering goods, agricultural products including spices and tobacco, and leather footwear. Increased sales of tea to the Middle East were also planned.

World Economic Indicators

RETAIL PRICES
(1980=100)

	May '85	April '85	March '85	May '84	% change over previous year
U.S.A.	130.1	129.8	129.2	125.5	3.7
UK	142.4	141.8	138.8	133.1	7.0
	April '85	March '85	Feb. '85	April '84	
W. Germany	121.1	120.9	120.5	118.1	2.5
France	156.9	155.8	154.7	147.3	6.5
Italy	188.3	186.6	185.1	171.9	9.5
Netherlands	122.4	121.9	121.0	119.4	2.5
Belgium	140.3	139.8	138.7	133.1	5.4
Japan	113.9	113.4	112.9	111.9	1.8

Source: (except UK, U.S.): Eurostat.

Reagan opposes textile quota Bill

By Nancy Dunne in Washington

THE REAGAN Administra*tion has come out strongly in* opposition to the popular textile and apparel quota legislation being considered in Congress.

In a letter to all members of commerce, the secretaries of state, commerce, treasury and labour and the acting U.S. Trade Representative called for *the defeat of the* measure.

The legislation is not necessary to maintain "A strong, viable domestic textile and apparel industry," they said.

"Indeed, the level of protection contemplated in the Bill is not only contrary to the free-market principles *which* have made *our* economy the envy of the world, but would adversely affect every citizen in the U.S. because of higher consumer costs."

The legislation already has the backing of a majority of House and Senate members, and unless the Administration can get the Bill stalled in committee, *it may well be* passed.

Some Senators are considering the possibility of attaching it to legislation vital to the President to avoid a veto.

Under the legislation, total U.S. textile imports would be cut by almost 27 per cent, according to a report prepared by the Commerce Department. The study shows that textile shipments from the "big five" exporters (Hong Kong, Korea, Taiwan, China and Japan) would shrink by 37 per cent.

The Bill is designed to push import levels back to where they would have been had they not *risen* so much last year.

The study found that Brazilian textile imports would be cut by 80.5 per cent. China's would decline by 59.1 per cent.

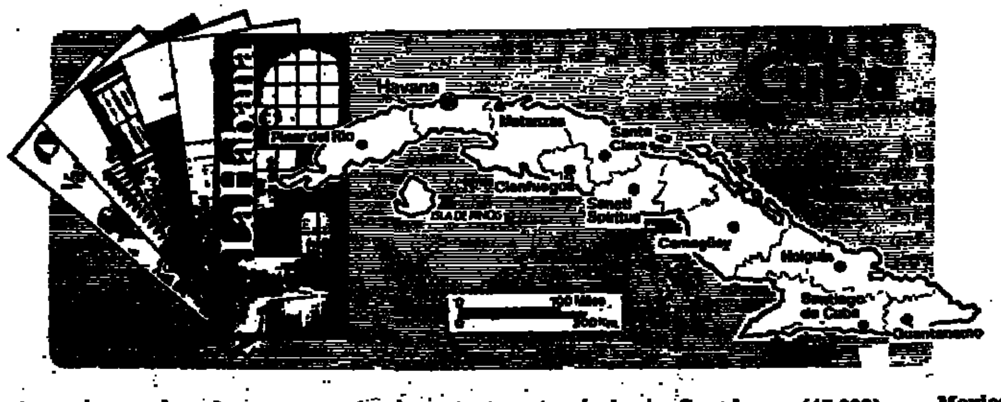
However, textile imports could *rise* by 230 per cent from Chile, 42.8 per cent from Poland, 21.7 per cent from Switzerland

UK asks Taiwan to cut wool import tariffs

Britain has asked Taiwan to cut its import tariffs on machinery and wool to redress the trade imbalance between the two countries, the Taiwan Finance Ministry said, Reuter reports from Taepei.

Frank Gray recently in Havana rcports on plans to double hotel capacity

Cuba sets out to lure the foreign tourist



CUBA's tourism industry is embarking on a five-year programme to more than double the country's accommodations in anticipation of even greater foreign currency earnings than were accrued in the first half of the decade.

Sr Jesus Jiminez, vice-president of the Instituto Nacional de Turismo (Intur), the state tourism organisation, said that hard currency earnings in the sector last year were the best of the past 10 years, when Cuba began seriously to encourage the revival of foreign tourism.

Hard currency earnings were estimated at $100m, based on more than 206,000 foreigners visiting the country.

Sr Jiminez said about pesos 500m ($465m) is to be spent in the five-year period to boost accommodation from 17,000 beds to 37,000. Varadero Beach, 85 miles east of Havana, is the traditional centre for tourism. It will be the key beneficiary, but more effort will be put into sprucing up Havana's big hotels.

In Havana, little has been done to improve accommodation since Fidel Castro came to power in 1959; as a consequence, such once-grand hotels as the Nacional, Habana Libre, Capri, Riviera, Deauville and St John's will figure in the face-lift programme.

However, because of the numbers now coming into the country, Intur will also shift some resources to boost tourism capacity beyond the main centres in such places as Holguín, Santa Lucia, Pinar del Rio, Matanzas and the Isla de Juventud off the south coast.

Foreign contractors who are anxiously watching the Cuban turist development plan, will be disappointed as few big projects are likely to be let to non-Cuban concerns. There have been exceptions: an Argentine group recently completed a turnkey contract for accommodation at Varadero beach, but much of the work will be done by Cuba's Unica building company.

The sector is dominated by tourists travelling on inclusive tour packages, marketed abroad by Cubatur, the overseas arm of Intur. In order to ease some of the tight regulations connected with travel in Comecon countries, Cuba has eliminated the need for tourist visas, and now simple travel cars are more easily obtained.

An important sector is business travel, which at the moment is only in the thousands, but is bound to rise given Cuba's commitment to do more business with the West in an effort to modernise an economy still without access to U.S. equipment and know-how.

The great unknown quantity, however, is the expatriate Cuban Americans, who have been flooding in at 1,000 per week this year. But this form of travel, facilitated only by special political dispensation in the U.S. and Cuba, is threatened with suspension following Havana's protest at Washington's recent decision to inaugurate what it says are propaganda radio broadcasts from Florida.

Of the 206,000 visitors entering the country, some 168,000 originated in Western countries. They were dominated by Canada (45,000), Mexico (25,000), Spain (22,000), West Germany (20,000) and Italy (20,000) as well as increasing numbers of visitors from other European nations such as France. The Comecon bloc, particularly East Germany, provided 38,000 visitors.

In Europe, Cuba's historic Spanish connection is vital to its long-term tourist development programme. Iberia Airlines of Spain is Cubatur's primary marketing arm on the Continent and, because of its extensive intra European and Latin American route networks, is the main conduit for European visitors.

The company enjoys a special relationship with Cuba because it was one of the few Western airlines to maintain air links into Havana during the revolution's darket days in the 1960s, when tourism came to a virtual standstill.

Similar exclusivity is enjoyed by Air Canada, which overcame U.S. objections 10 years ago and started regular operations into Varadero, overflying U.S. airspace. Another main connection is Aeromexico, which has always maintained a busy link with Cuba.

Cubana de Aviacion, the Cuban national airline, does not object to the comparative strength of its competitors. It is bound to operate "political" routes to Luanda and Maputo in houthern Africa as well as to Prague and East Berlin. It has built up commercial services to Paris, Madrid, Montreal, Lima and throughout the Caribbean basin.

However, its route development plans are limited by its equipment, basically 25-narrow bodied Soviet-built aircraft, says Sr Rolando Boné, the company's commercial director. It has long sought to acquire used U.S.-built aircraft, such as Boeing 707s, but has been unable to do so because of U.S. laws on high-technology sales.

Cubana, with the opening of the Canadian market, was able to acquire used DC-8s from Air Canada, but one was destroyed in a terrorist explosion and the other has since been retired.

Sr Boné says Cubana is still in the market for U.S. equipment, but in the meantime it is content to leave the bulk of support for Cuba's tourism industry to foreign airlines.

Japan rejects calls for foodstuff tariff reforms

BY CARLA RAPOPORT IN TOKYO

JAPAN'S Agriculture Ministry has rejected calls for significant reform of Japan's tariffs on agricultural products.

In a statement at the weekend, the ministry proposed that tariffs be cut on about 40 per cent of those foodstuffs which are taxed, including items primarily imported from Southeast Asian countries. The Ministry said it would oppose tax cuts on those items important to Europe and the U.S., *such as* beef, cheese, chocolate, wheat, butter, oranges and pork.

The Ministry's position will be considered tomorrow by Premier Yasuhito Nakasone, his cabinet and leading Japanese politicians. The meeting is expected to approve a number of tariff cuts as a first step toward the formation of an Action programme on boosting Japan's imports, expected by the end of next month.

Agriculture Ministry officials have conceded that their stance will not be popular with their main trading partners, particularly the U.S., which has been *pressing for* a reduction in taxes of beef, oranges and wheat in particular.

Even so, the Ministry believes that Japan's huge trade surplus would not be reduced substantially if all the tariffs were lifted. As a result, they favour a continuation of the current regime.

Those items on which the Ministry has recommended tariff cuts include boned chicken, mainly imported from Thailand, palm oil (from Malaysia) and bananas (from the Philippines). Seasonal tariffs on bananas will not be removed, however.

These recommendations are well-timed, as the second economic ministers conference between Japan and the Association of Southeast Asian Nations (ASEAN) is to be held in Tokyo this week.

Tokyo buys two satellites from Hughes offshoot

Japan Communications Satellite (JCS) has ordered two satellites worth $300m (£238m), including launching costs, from Hughes Communications of the U.S., Reuter reports from Tokyo.

JCS, a joint venture of C. Itoh, Mitsui and Hughes, a subsidiary of Hughes Aircraft, has received approval from the Posts and Telecommunications Ministry to offer basic communications services, C. Itoh said.

Japan's telecommunications sector was opened to private firms last April 1.

The company will launch a satellite in December 1987 and the second in April 1988 and will start communications services in February 1988, the company said.

U.S. officials said the U.S. would also like Nippon Telegraph and Telephone (NTT), the former state monopoly, to buy a U.S.-made satellite to help reduce the U.S. trade deficit with Japan.

SHIPPING REPORT

Little activity in tanker and dry cargo markets

BY ANDREW FISHER, SHIPPING CORRESPONDENT

IT WAS not a week to set hearts racing on the tanker and dry cargo market—despite their conditioning to long periods of weak rates and sluggish trading, some shipbrokers described last week as one of the quietest ever.

This was especially true of the tanker sector, where the dull conditions of the previous week persisted. Mr E. A. Gibson, the London broker, hoped the July 5 Opec meeting would help the market by bringing some agreement on oil prices and quotas.

Ships in the Gulf, found it harder to obtain cargoes, Mr Gibson said. One ULCC (ultra large crude carrier of 300,000 deadweight tonnes) was fixed from Saudi Arabia to the Red Sea, with three months' storage and an option on three more.

The rate was estimated at some $6,000 a day. A 65,000 ton cargo was arranged from Kuwait to the UK and the Continent at Worldscale 47.5. Indonesia was more active, but West Africa and the Mediterranean were quiet.

Bearing out the continued poor state of tanker markets, Lloyd's Monthly List of Laid Up Vessels showed there were 334 such vessels of 53.6m tonnes laid up on June 1, slightly more than the previous month.

In the dry cargo sector, Denholm Coates said: "It was another sombre week." Despite a small increase in Atlantic activity, rates eased. There were 50 cent drops in grain rates from the U.S. Gulf to Europe

Soviet Union chartering activity for grain has abated. But there were reports of Soviet purchases of up to 14 handysize (20,000-45,000 dwt) bulk carriers at $4-7m each.

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UK NEWS

Transport union softens defiance of labour laws

BY BRIAN GROOM AND ARTHUR SMITH

BRITAIN'S largest trade union, the left-led Transport and General Worker's Union (TGWU), has started taking a more flexible line towards the Government's labour laws even before its biennial conference decides this week whether to modify its formal policy of defiance.

The conference opens today in Bournemouth, on the south coast of England. Mr Moss Evans, general secretary, declined yesterday to predict which way delegates would decide, but added: "I have no doubt at all that they will take a pragmatic line."

Signs of pragmatism are already emerging. They include:

- A statement by Mr Evans yesterday that the union is likely to defend itself in court against a damages claim from Austin Rover arising from last November's strike.
- A decision by the TGWU's London bus committee to hold a secret workplace ballot next Tuesday before taking industrial action on pay and productivity.
- The likelihood that a ballot will be held if, as is threatened, Ford's assembly line workers take action over a pay grievance next winter.
- References made by Mr Evans yesterday to a ballot which was held before the current national pay strike at Golden Wonder, and another held at Pirelli on retaining union membership agreements.

The union is strenuous in claiming that all this is happening within current policies and rules. "If you look at our rule book there is nothing preventing any of our members from having a ballot," Mr Evans said. "We do not have to change our rules to meet the requirements of this legislation."

Moss Evans: 'nothing to prevent a ballot'

Mr Evans said the union would defend itself in court. Its decision not to do so before when faced with contempt proceedings for disobeying an injunction in the Austin Rover case – for refusing to withdraw a strike call until a ballot was held – was taken because counsel said the only defence was to repudiate the actions of union officials. He said the union had not been prepared to do this. That led to a £200,000 fine.

"Defending ourselves against a claim for damages is a different ballgame altogether," Mr Evans said. "We would defend ourselves because we believe we were more damaged than Austin Rover were."

It is understood, however, that the TGWU is the only one of eight unions not to have so far submitted a statement of defence, in response to Austin Rover's statement of claim for damages as a result of last November's strike.

The company, the volume cars subsidiary of state-owned BL, sent a letter by hand to the union's headquarters last Friday giving it a week to do so. Otherwise, Austin Rover would seek a "default judgment" from the office of the High Court, making the union technically guilty when the full hearing takes place.

- The National Union of Railwaymen (NUR) should review its policy of opposition to the pre-strike ballot requirements of the 1984 Trade Union Act, Mr Jimmy Knapp, its general secretary, said yesterday, David Brindle writes.

His comments came on the eve of the NUR's annual conference in Ayr, Scotland, where it will discuss a branch resolution calling on the union's national executive to "seriously consider" pre-strike votes.

Mr Knapp would not say whether he would speak in support of the resolution. He did say that the policy could be reviewed with, in his view, no change in the NUR's basic opposition to the Government's employment laws.

One factor in Mr Knapp's thinking is undoubtedly the failure of last month's strike among NUR members on London Underground, called without a ballot. He pointedly said yesterday that the object of calling strikes was to win them.

Another factor is British Rail's demand for £200,000 damages from the NUR and the train drivers' union Aslef, arising from the 24-hour strike staged on parts of the Eastern and Midland railway regions on January 17.

Racing paper responds to challenge

BY TERRY POVEY

PLANS to revitalise The Sporting Life newspaper and cut costs have been announced by Mr Robert Maxwell, chairman of the Mirror Newspaper Group which owns it.

The move follows closely on the announcement of the launch of a competitor for the 126-year-old horseracing paper. The Racing Post is due to appear in early 1986 and is being financed by the four Maktoum brothers, members of the Dubai royal family, who are leading racehorse owners.

For both The Sporting Life and its challenger the key problem is the limited size of the readership. Both papers will be fighting over a market not thought to be much bigger than The Sporting Life's existing circulation of 75,000.

The Sporting Life has been losing money for some time – a £3m loss is expected this year. Mr Maxwell said: "There's no room for two such publications. The Life has been tops for 126 years and I am prepared to spend whatever is required to keep it there."

Key to the revitalisation will be a switch to a new printing plant – almost certainly one which is part of the Maxwell-owned BPCC printing and communications organisation – to allow the use of colour and reduce production costs.

The Post is being headed by Sir Gordon Brunton, formerly chief executive of the International Thomson Organisation and a horse breeder. The Maktoums are reported to have provided £5m to start the paper and to have guaranteed to back it for up three years.

Lack of training revealed in survey

By Alan Pike, Industrial Correspondent

PRIVATE sector companies in Britain spend an average of £200 per employee a year – only 0.15 per cent of turnover – on training, according to a survey undertaken for the Manpower Services Commission (MSC).

The survey reveals a giant gap between employers' purported attitudes towards training and their actual investment in it.

A total of 89 per cent of employers interviewed in the survey said they regarded training as an essential investment. Almost the same proportion believed training was necessary to maximise productivity and profits, and 95 per cent said they recognised that their employees needed to learn new skills.

Yet evidence from the same employers indicates that only about £2bn a year is being spent on training by private sector companies with 25 or more employees – a fraction of expenditure in countries like West Germany, the U.S. and Japan.

The survey found that 24 per cent of establishments had provided no training of any kind during the previous 12 months.

Almost all types of relatively informal on-the-job instruction have been included in the survey's definition of training. Off-the-job training amounted to an average of 5.5 days a year for those employees who received any training during the 12 months prior to the survey, or 1.9 days spread across the private sector workforce as a whole.

This, says the survey report, compares with the "9.5 days per year which, it has been calculated, British managers spend on business lunches above a normal lunch break."

The survey, carried out by IFF Research, was commissioned by the MSC as part of its adult training campaign. Interviews covered a sample of both manufacturing and service sector companies with a total of 330,000 employees.

Mr Bryan Nicholson, MSC chairman, said the lack of investment in training illustrated by the survey was "bordering on the foolhardy." But the findings also demonstrated a definite link between business success and training performance.

UK NEWS

Director of Hawley to leave in shake-up

By Alexander Nicholl

MR PETER BAIN, a key director of the Hawley service industry group headed by Mr Michael Ashcroft, is to leave the company amid a surprise shake-up of its peripheral investment interests.

Mr Bain, 42, will take on an executive role in Pineapple Dance Studios, the once-glamorous concern headed by Ms Debbie Moore, which has recently slipped into loss and suffered a sharp fall in its share price.

An investment vehicle controlled by Hawley is meanwhile selling its 28 per cent stake in Pineapple – half of the shares are understood to have gone to Mr Bain himself. It is also disposing of large minority holdings in the Miss World group and in Group Lotus.

Mr Bain's departure, expected to be formally announced this week, is one of a long series of surprises which have dogged Hawley's image in the City of London as it has grown at a bewildering pace through rapid acquisitions, financed largely by issues of new shares.

Last year, during a campaign to improve UK investors' understanding of the company's central businesses, it announced that it was moving its domicile to Bermuda.

Mr Bain, a marketing expert who has headed Hawley's home improvement subsidiary Kean & Scott and will remain a non-executive director there, has been responsible for the drive to explain the company to investors and the press. Since last year, he has been its spokesman.

Hawley has been focusing its growth on commercial cleaning, security products and home improvements, with a marked emphasis on expansion in the U.S. But it has attracted City criticism because of its diverting non-core investments.

Last year Mr Ashcroft and his friend Mr David Wickins, chairman of British Car Auctions, channelled most of their respective secondary interests into Midepsa, a Montreal-quoted shell company.

Despite the recent sales, Midepsa still has substantial interests. It owns the motor dealers Henlys, the limousine manufacturer Coleman Milne and has a stake in the packaging group Cope Allman.

Joint attack mounted against Insolvency Bill

BY GEORGE GRAHAM

A RARE alliance of business and consumer lobbies has come together in an attack on the Insolvency Bill now being put through parliament by the Government.

The Confederation of British Industry and the Institute of Directors (IoD) have joined the National Consumer Council (NCC) in condemning as inadequate the Bill's provisions for making directors personally liable for their companies' debts when they are found guilty of "wrongful trading."

The three groups have together drafted a new version of the Bill's clause 9, which defines the offence of wrongful trading. They have written to Mr Norman Tebbit, Secretary of State for Trade and Industry, asking him to adopt the new clause at the Bill's report stage.

They believe the present version of the clause "is obscurely worded, is unlikely to be effective where it is needed but could have undesirable consequences for the whole business community."

"It would catch nobody at the right time, but might catch everybody when it was too late," said Mr Richard Thomas, legal officer of the NCC.

The NCC has been at loggerheads with the CBI and the IoD during the Bill's passage through the House of Lords. They fought successfully to quash plans for the automatic disqualification from holding office of directors whose companies were wound up.

The consumer group described itself as "sadly disappointed that business interests were able to bamboozle the House of Lords into seriously diluting the Insolvency Bill."

During the House of Commons committee stage, however, the three groups were brought together by their dissatisfaction within Clause 9 as it now stands.

They feel that Clause 9, in conjunction with Clause 7 – which provides for the disqualification of unfit directors – should solve the problem of phoenix companies, which close down one day and start again the next under a new name, leaving a string of unsatisfied creditors.

The Government has suffered a string of setbacks over the Insolvency Bill. It was outvoted three times when the Bill passed through the House of Lords, and was prevented from reversing one of these defeats in the House of Commons committee stage by a revolt of Conservative backbench MPs. Three Conservatives also abstained from the vote on Clause 9.

Cabinet reviews spending plans

BY MARGARET VAN HATTEM

CABINET ministers met last night for what was described as "a strategic review" of public spending plans over the next decade.

Much of their five hours of talks is, however, understood to have involved a staking-out of territory in advance of negotiations for the 1986–87 spending round which opens on July 4. The discussions focused on the issue of tax cuts.

Mrs Margaret Thatcher, the Prime Minister, Mr Nigel Lawson, the Chancellor of the Exchequer, Mr Peter Rees, Chief Secretary to the Treasury, and Mr Norman Tebbit, Trade and Industry Secretary, have over the past week all put on record their commitment to tax cuts before the next general election.

Mrs Thatcher, speaking at the Welsh Conservative conference at the weekend, explicitly promised further tax cuts. "Yes, we are cutting personal taxes – not yet enough – but we are going in the right direction and we intend to go further," she said.

At yesterday's talks at Chequers, the Prime Minister's country house, Mr Rees is understood to have shown projected spending levels over the next decade with particular reference to the soaring costs of defence, education and health and social services.

Mr Lawson is believed to have assured his colleagues that there would be no spending cuts package this autumn – but to have stressed that there would be little room for spending growth over the next three years if the planned £9.5bn tax cuts were to be introduced.

The meeting is understood to have concluded with a long discussion of the options facing the Government, but without any decisions being taken.

Tory MPs rebel over EEC payment

THE GOVERNMENT will face a mini-rebellion tomorrow by some of its MPs over legislation approving an extra £250m payment to the EEC budget for 1985.

Conservative parliamentary officials were last week confident that, while the number of abstentions might be substantial, only a handful would vote against the Government.

The European Communities (Finance) Bill, which is being opposed by Labour, seeks approval for both the "own resources decision" (raising the ceiling on VAT contributions by member states from 1 per cent to 1.4 per cent) and the intergovernmental agreement (providing for a top-up of £1,180m to the 1985 budget, of which the UK share is £250m).

The Government insists that the impact on the UK budget will be minimal. The special arrangement for abating the UK's VAT contributions means that the maximum VAT rate due from Britain is expected, it says, to remain below 1 per cent throughout the life of the 1.4 per cent ceiling.

Of the £250m extra contribution, the Treasury estimates that about half will return to the UK in the form of higher receipts, while the rest will be covered by the special arrangements agreed at the Fontainebleau summit, so that the net cost to Britain would be £40m.

The first signs of Tory backbench hostility emerged last week in an amendment to a government motion on development in the European Community. The eight signatories were led by Mr Teddy Taylor and Mr Jonathan Aitken. They called on parliament to ignore "foolish and impractical proposals"

Company Notices

ACCOR

"Société Anonyme au capital" de F. 890,218,700
Head Office: 2 rue de la Mare Neuve — 91000 EVRY
RCS: Corbeil Essonnes B 602036444

Resolutions passed on May 28, 1985 by the General Assembly *of the holders of ACCOR — 7½% — 1984-1999 US$ 1,000 Convertible bonds.*

First Resolution

The General Assembly of the holders of Accor — 7½% — 1984-1999 US$ 1,000 International Convertible Bonds, at an ordinary meeting, acting pursuant to Article 312 of French law of July 24, 1966, and having taken knowledge of the terms of the Board's report, has decided to appoint as Representatives of the "Masse" of the holders of said Bonds:

—Mr Julian STURDY MORTON
—8, Burnley Road, London SW9 0SH

—Mr Jean-Claude NOHEN
—17, Boulevard Bourdon — 75004 PARIS

Such representatives shall have, without any restriction jointly or severally, pursuant to article 300 of French law of July 24, 1966, power to take, on behalf of the "Masse" all management actions to defend the common interests of the Bondholders.

The term of their office shall be on the last day of the one-year period commencing on the date set for the repayment of the Bonds included in the last amortization operation.

The Assembly sets the remuneration of each of the Representatives of the "Masse" at FF. 1,500 a year.

Second Resolution

The General Assembly of the holders of Accor — 7½% — 1984-1999 US$ 1,000 International Convertible Bonds, at an ordinary meeting, having heard of the Board's report, and having taken knowledge of the third resolution passed by the General Assembly of *the shareholders at an extraordinary meeting, on* May 28, 1985 authorising the Board to effect in France, on the international market or on the foreign market, one or several issues of bonds with warrants to purchase equity shares of Accor, approves, as far as it is concerned, the decision made by the shareholders to waive the exercise of their preferential right to subscribe the Bonds with warrants to purchase equity shares, which could be issued, it being understood that said resolution has reserved, during the first 15 days of the issue, a priority right to the shareholders in case of an issue on the French market.

Third Resolution

The General Assembly at an ordinary meeting, decides that all documents in connection with its calling, its resolutions, its decisions, will be available at the head office.

All powers are given to the bearer of an extract or a copy of the minutes of the present meeting in order to proceed to any necessary registration or publicity.

THE "SHELL" TRANSPORT AND TRADING COMPANY, p.l.c.

Notice is hereby given that a balance of the register will be *struck on Thursday, 4th July, 1985* for the preparation of the half-yearly dividend payable on the SECOND PREFERENCE SHARES, for the six months ending 31st July, 1985. The dividend will be paid on 1st August, 1985.

For Transferees to receive this dividend, their transfers must be lodged with the Company's Registrar, Lloyds Bank Plc, Registrar's Department, Goring-by-Sea, Worthing, West Sussex, not later than 3.00 pm on Thursday, 4th July, 1985.

By Order of the Board
D. W. CHESTERMAN
Secretary

Shell Centre
London SE1 7NA
24th June, 1985

Money Market Cheque Account Jersey

Gross Rate	Compounded Annual Rate
11.50	12.13

(Minimum balance £2500)
Annual Report and Accounts available on request.
Manager. Ronnie Horne
4, Don Road, St. Helier, Jersey. Tel: 0534 38855.
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(incorporated in Edinburgh, 1695)

ENERGY INTERNATIONAL N.V.

(Incorporated with Limited Liability in the Netherlands Antilles)

Shareholders in the Fund are convened to attend the Annual General Meeting of shareholders to be held on Monday, 15th July, 1985, at 10.00 a.m. at the registered office of the Fund at Pietermaai 15, Willemstad, Curacao, Netherlands Antilles. The items on the agenda are:

(1) Report and Accounts and proposal of a dividend of US$2.00 per share for the business year ended 31st March, 1985.

(2) Election of the Members of the Board of Management.

In order to attend the Meeting in person or by proxy and to have their votes registered at the Meeting, holders of bearer shares must deposit their share certificates (or a deposit receipt for the share certificates) mentioning their names addresses and nationalities at the registered office of the Fund not later than 8th July, 1985.

By order of the Board of Management

Curacao, 24th June, 1985

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FIELDBORNE, 63, Queens Grove, NW8. *Heads-Adams Dunstan, Hockney, Gore, Spear,* Weight and others 01-586 3600.

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(Algerian Popular Democratic Republic)

Ministere de L'Energie et des Industries Petrochimiques

(Ministry of Energy and Petrochemical Industries)

Enterprise Nationale des Travaux aux Puits

(National Oil Exploitation Company)

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The National Oil Exploitation Company (E.N.T.P.) - 16, Route de MEFTAH - OUED SMAR - EL HARRACH - ALGER - hereby informs companies concerned with International Call for Tender No. 9136.AY/MEC for the supply of:

09 FORKLIFT TRUCKS

that the closing date, initially indicated as 8/6/85, has been extended to 6/7/85.

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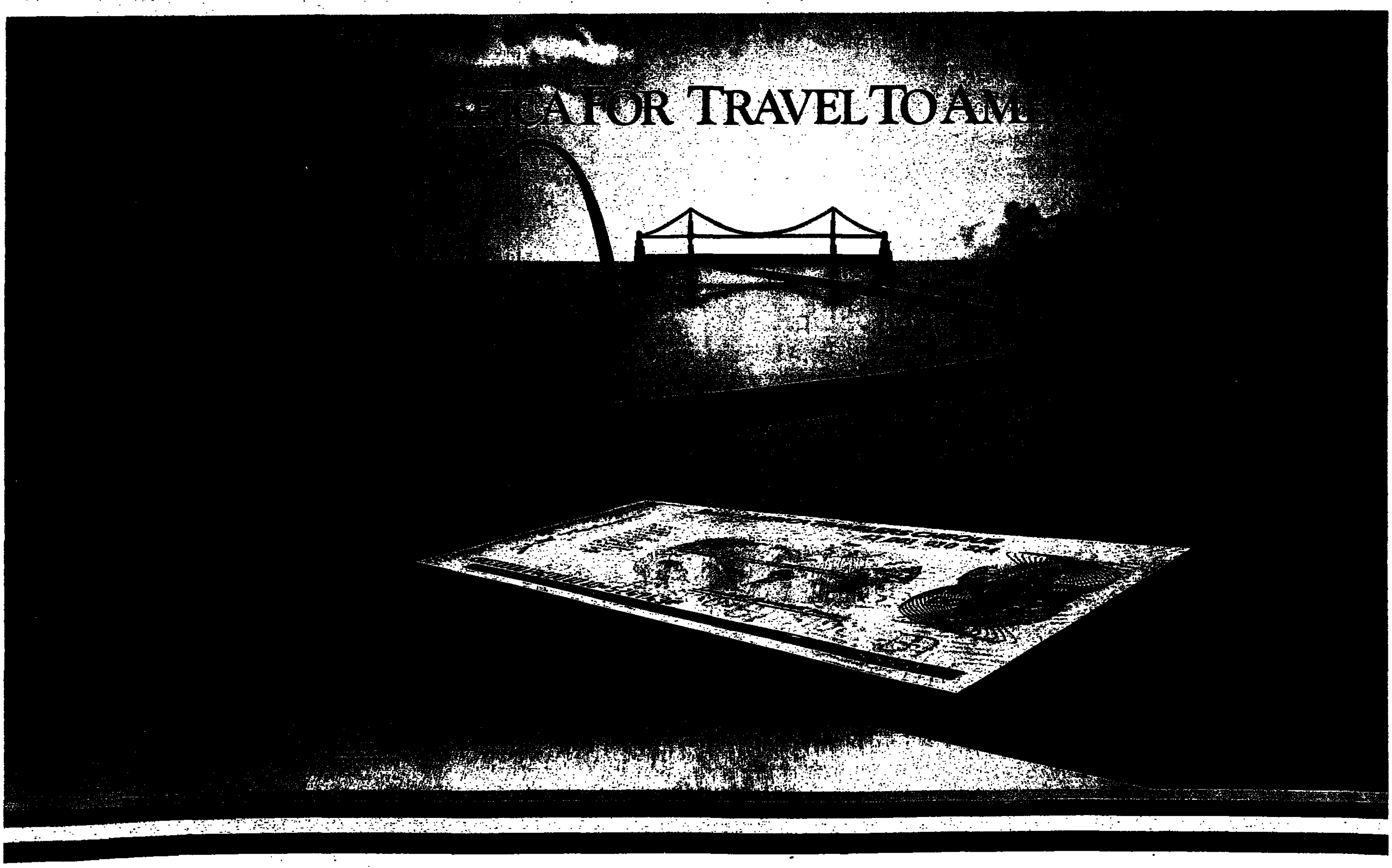


UK NEWS

Price war over petrol may be renewed

By Ian Hargreaves

RETAIL PETROL prices in the UK appear to be on the slide again after two months of stability.

Both Esso and Shell say they are now offering dealer support incentives to allow their retailers to compete with cut-price offers by smaller, independent petrol companies in the north of England. Competition is, as usual, especially fierce in the north-west.

Almost one in five Shell stations have now cut their prices, in the main to 199.8p a gallon. The official price, which still prevails in most of southern England, is 204.6p.

After fighting a cut-throat price war for most of last year, the oil companies were hoping for a period of respite. The last two months have been the industry's most profitable in downstream oil products for some time.

Independent suppliers, however, have been able to take advantage of the rise in sterling against the dollar, in which spot market gasoline is priced, to buy lower priced bulk petrol.

Strasbourg court to rule on £455m claim

Raymond Hughes looks at the case against the UK Government over compensation for nationalisation

THE LARGEST compensation claim yet made against the British Government under the European Human Rights Convention will come before the Human Rights Court in Strasbourg today.

Eleven former shareholders in companies nationalised under the 1977 Aircraft and Shipbuilding Industries Act will ask the court to rule that they are entitled to more than £455m in extra compensation for the loss of their holdings.

They will argue that the compensation they were paid – a total of £125m – was grossly inadequate and unfair and that their property rights guaranteed by the Convention were violated.

The claims will be vigorously resisted by the Government, which will contend that the UK has fulfilled all its Convention obligations to the shareholders.

A slightly bizarre aspect of the case is that the Government will be defending a law – the 1977 Act – enacted by a Labour Government, which the Conservative opposition of the day strenuously opposed – not least on the ground that its compensation provisions were unfair.

The Government will go into today's hearing with a head start: in March last year the European Human Rights Commission rejected the shareholders' claims, holding that the Government had not breached Article 1 of the First Protocol to the Convention, which protects property rights.

The shareholders were able to draw some comfort from the fact that, despite its decision, the Commission referred the case to the court.

Though not without precedent – it has happened once before and once since, in a case involving the UK – a reference to the court in such circumstances is unusual.

They will have at the back of their minds a Swedish case over property rights in which the Commission ruled against the applicants by a large majority but the court, by a narrow majority, took the opposite view.

They will also have been heartened by the disclosure two months ago that last November a senior legal official in the Department of Trade and Industry acknowledged in a letter to the U.S. Securities and Exchange Commission that the court might rule that more compensation should be paid.

Seven applications are before the court. The shareholders involved are: Sir William Lithgow, who held a substantial holding in John G. Kincaid & Company; Vosper, in respect of its subsidiaries Vosper Thornycroft (UK) and Vosper Shiprepairers; English Electric Company and Vickers, which jointly owned British Aircraft Corporation (Holdings); Vickers, in respect of its subsidiary Vickers Shipbuilding Group; Yarrow, which owned Yarrow (Shipbuilders); Dowsett Securities, Investors in Industry and the Prudential Assurance Company, which were joint owners of Brooke Marine, an East Anglian shipbuilding company; and Banstonian Company and Northern Shipbuilding & Industrial Holdings, which owned Hall Russell & Company.

The compensation paid, and the additional sums claimed (so far as yet quantified) are: Sir William Lithgow £1.07m (£4m); Vosper £5.3m (£48.8m); English Electric and Vickers £95m (£344.7m); Vickers £14.5m (£24.3m); Yarrow £6m (£24m); Dowsett etc £1.8m (£4.9m); Banstonian etc £1.5m (£4.29m).

The claims are derived from valuations of the holdings at nationalisation, plus interest. All will have increased substantially by the time the court gives judgment, later this year, to take account of additional interest.

The Lithgow claim, for example, does not include any interest. That by English Electric and Vickers includes interest calculated to last October. The others have been calculated up to dates between December, 1980, and last September.

Article 1 provides that no one shall be deprived of his possessions "except in the public interest and subject to the conditions provided for by law and by the general principles of international law."

However, those provisions, the Article states, "shall not ... impair the right of a State to enforce such laws as it deems necessary to control the use of property in accordance with the general interest."

The 1977 Act provided for compensation to be paid on the basis of the actual or hypothetical stock market valuation of the shares over a six-month period to February, 1974.

The shareholders' complaint is that the amounts they received bore no relation to the actual values of the companies. They also complain about the valuation method; the effect of restrictions on dividend payments and other transactions, and the failure to take account of inflation.

The Commission held that there was a right to compensation under Article 1 when companies were nationalised, where compensation was "necessary to preserve the appropriate relationship of proportionality between the interference with the individual's rights and the public interest."

It went on to find that the compensation awarded did not involve the imposition of a disproportionate burden, such as to infringe the shareholders' rights under the Article.

The Commission recognised that, in some cases at least, there was a wide divergence between the value of the company at nationalisation and the compensation paid, but said that, to a large extent, that reflected the fact that business conditions and prospects, and share values, could flucturate rapidly.

"The compensation method adopted provided compensation reasonably related to the value of the companies concerned as at the start of the nationalisation process and ignored subsequent fluctuations in their value.

"Although opinions evidently differ as to the fairness of such a method, the Commission considers that it was one which the Government were entitled to adopt within the wide margin of appreciation afforded to them under Article 1."

Change urged in EEC's starch subsidy

By Andrew Gowers

THE EUROPEAN Community should move swiftly to introduce special subsidies for the industrial use of starch, and in particular for biotechnology industries, says a report published today by a House of Lords select committee.

The report supports the European Commission's recently-published plan to change the controversial £154m EEC starch regime, which aims to compensate starch manufacturers for the artificially high price at which they are forced to buy the grain they use as a raw material.

It says there is an urgent need to implement the Commission's proposals "to remove the uncertainties which at present hinder decisions being taken in the new biotechnological industries ... All too often the United Kingdom has lagged behind in exploiting new opportunities for industry."

The Commission's plan, due to be considered by EEC farm ministers in coming months, calls for the abolition of subsidies paid to manufacturers of starch for use in the food and drink industries, which it says already benefit from protection against imports under the Common Agricultural Policy.

Instead, it says, higher subsidies should be paid for the manufacture of starch for use in other products such as paper, board and chemicals, which suffer from a competitive disadvantage as a result of having to pay high EEC prices for wheat and maize, but benefit from no protection against imports made at lower cost.

The proposal has caused uproar among food manufacturers – particularly in Britain, where the food industry accounts for a greater proportion of starch use than in other EEC countries.

MANAGEMENT

EDITED BY CHRISTOPHER LORENZ

Davy Corporation

Keeping one step ahead

Ian Rodger describes how the UK process plant maker has managed to stay profitable

WHATEVER ELSE can be said about Davy, Britain's leading process plant contractor, the group is an excellent example of corporate adaptation.

Davy has had some terrible reverses in recent years — the collapse of its steel fabricating business, a slump in U.S. plant orders and horrendous losses on a chemical project in the Soviet Union. But it has managed to stay among the top six contractors in the world and to keep its operations profitable.

One key to Davy's survival—setting aside the help of the UK Monopolies Commission in fending off an unwelcome take-over bid from the U.S. engineering group, Enserch, in 1981—has been its ability to react quickly to trends in its industry.

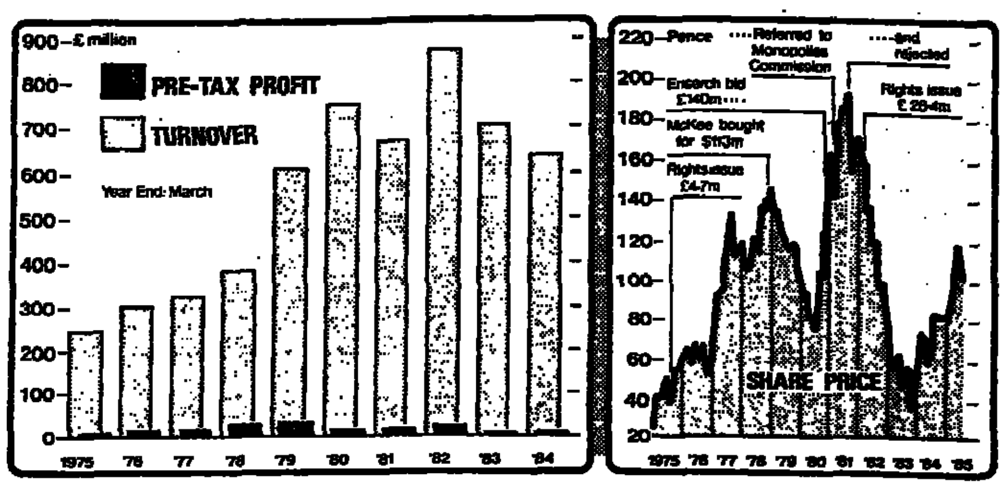
In the late 1960s, Davy saw the trend to megaprojects and realised that customers preferred dealing with very large contractors. It set out on a series of acquisitions to build up the group's size, geographical coverage and range of skills so that it could handle even the biggest projects.

For a while, that was a successful formula. Davy picked up a $1bn contract to build an integrated iron and steelworks in Brazil, a $430m oil refinery project in Canada, a $380m rolling mill complex in Yugoslavia and several others.

But by the early 1980s, the megaproject era was over. Most of the developing countries no longer had the money to finance them; the industrialised countries were deep in recession and no longer needed big new plants.

An important change in the relationship between contractors and clients was taking place too. In the 1970s, the turnkey concept, in which a large contractor would take total responsibility for an entire project, was popular. If it didn't have all the needed technology, it would buy it from others. Indeed, many contractors used their lack of technology as a selling point, saying they were unbiased and would buy the best technology available.

Today, the trend is in the other direction. Customers worry above all about the performance of new plants and so prefer to deal with a contractor who uses his own technology. Contractors, facing very tough competition for the few orders available these days, prefer to promote proprietary competitive edge. Also, they technologies where they have a make better margins on these deals because they do not have to pay royalties to the owner of the technology.



"Wherever you see a good technology in Davy today, you see a good business," Graham Raper, the deputy chairman, says.

Davy's traditional technologies are in iron and steel, dating from the 1830s when the Davy brothers set up in Sheffield to make steel mills and forges. Its period of expansion and diversification began in 1960 when it acquired Powergas, a builder of town gas plants and chemical and fertiliser plants. It had the rights to the ICI technology that enabled Davy to become the dominant supplier of methanol plants in the world. Powergas also owned Ashmore, Benson, Pease, the leading blast furnace maker, and Davy is still among the top world suppliers of blast furnaces. Earlier this month, it won a $75m contract for a new furnace in South Korea.

However, until the early 1970s, it was still mainly a UK group. Then, under the leadership of Sir John Buckley, it embarked on a series of foreign acquisitions. These included three German companies, Bamag (water and effluent treatment plants), Zimmer (synthetic fibre plants) and Chimiebau (petrochemical plants) and two U.S. companies, Wellman-Lord (fertiliser and pollution control plants) and Olsen Engineering (oilfield development).

But its biggest move came in 1978 when it bought McKee of the U.S., a diversified plant supplier with 20 offices around the world, for $113m. McKee added food and pharmaceuticals, oil refineries and alternative fuels, plus a much expanded presence in the U.S. market. In 1980, two years after the McKee acquisition, Davy's turnover in North America reached £288m, 38 per cent of the group total, compared with only 26 per cent in 1977.

During this period, Davy also boought two UK manufacturing companies, the crane maker Herbert Morris and the Head Wrightson steel fabricating business, partly because they were somewhat complementary to its contracting activities, but mainly to bolster its asset base.

Until the middle of 1982, it looked as if Davy's expansion strategy was working. Both turnover and profits rose to new levels well above those achieved in the early 1970s. But then the markets for plants dried up worldwide. The group's forward order loan dropped from £220m in March 1982 to £152m a year later.

Among the big blows were the cancellation of a $1bn steelworks project in India and the deferment of steel projects in Brazil and Mexico. Pre-tax profits slumped from £20.4m in 1981-82 to £8.3m the following year. Davy shares tumbled from a peak of 205p in 1981 to only 35p in 1983.

Sir John Buckley retired late in 1982 and Peter Benson, the retired chairman of APV, another process plant group, was brought in to manage the needed restructuring.

The Brussels office, which specialised in petrochemicals, was closed and the work transferred to Cologne. Then Cologne was closed following losses of £14m on a petrochemical project for the Soviet Union and lesser losses on other contracts. The Soviet contract went sour because U.S. technology was used and the U.S. authorities blocked its transfer. Most of the Head Wrightson operation in the UK was closed and the remainder sold last year to a private group following huge losses. Davy's contracting subsidiaries, it turned out, did not use Head Wrightson for their fabrication work. In the U.S., McKee's head office in Cleveland and other offices in California and Texas were closed and the workforce slashed from 5,000 to only 1,100.

The total group workforce has dropped from a peak of 20,000 in 1980 to under 9,000 today. Rationalisation charges have exceeded £30m in the past three years.

That figure is remarkably close to the amount shareholders have put into the group via two rights issues in the past 10 years, and some would argue that Davy has very little to show for its decade of action. Certainly, there has been no progress on the earnings per share front and the shares themselves, much to the embarrassment of Davy directors, are worth little more than half of what Enserch was willing to pay for them in 1980. The title of "flagship for British exports" that the Monopolies Commission gave as a reason for preventing the Enserch takeover now looks rather pretentious on the medium-sized group that Davy has become. Its £201m worth of exports in 1983-84 were not enough to put it in the top 30 of British exporters.

For Davy new technology is the key to survival—as at this new steel cold mill being built by Davy McKee (Sheffield) in Yugoslavia

Benson, now about to retire after three years' hard labour, would invite the cynics to look at the other major process plant contractors. Fluor, in the U.S., reported a loss of $72m in the six months to April 30. Technip, has just received a FFr 2bn financial rescue package. By contrast, Davy has completed the surgery needed to bring its costs down to the much reduced level of orders available.

He also points out that Davy has recognised that the market potential of its traditional lines in metals and chemicals plants is much less than it was. The group has acquired and developed some strong light technologies in the past few years to take up the slack.

For example, Zimmer leads the world in synthetic fibre technology and has 40 per cent of the world's fibre plant orders, including 15 in China. Benson says the Frankfurt office, which has also become prominent in supplying flue gas desulphurisation systems (to prevent acid rain) is "the busiest part of the group" and will make profits of £5m next year.

In the metals area, Davy has developed a microprocessor-based shape control system for rolling mills, and has sold 85 of them into aluminium and steel mills around the world.

However, these may not be enough to bring about the kind of recovery and growth that Davy wants and that shareholders are entitled to expect.

Benson says the group has high hopes for an offshore contracting venture with Trafalgar House set up earlier this year, and that the remaining manufacturing businesses, Davy Roll and Herbert Morris, are doing very well.

Davy is always on the lookout for opportunities to buy good process technologies, and it wants to increase its interests in related service industries. It owns Lloyds British Testing, which does hoist maintenance for the National Coal Board and others and has a 50 per cent stake in Senelco, a company that supplies anti-theft tags for shops.

But process plant contracting, now 80 per cent of the business, will remain the dominant factor, and no one is predicting a major upturn in the sector in the near future. Davy has adapted remarkably well to the tougher environment in which it has to operate, but the obstacles to satisfactory growth and profits still seem considerable. It is striking that, even though the group's shares have been deeply depressed for over two years, no predator has yet been tempted to spring.

Management abstracts

The paradox of corporate culture. R. T. Pascale in California Management Review (U.S.), Winter 85 (15½ pages)

Quotes examples of how companies successfully create corporate cultures by deliberate process of "socialising" their employees; claims this need not break down individualism (which the Americans hold so dear), and describes the main stages towards socialisation; gives a checklist for rating a company's corporate culture, and suggestions for "humility-inducing experiences."

The managerial clerk syndrome. R. W. Larson and J. S. Fielden in Business Horizons (U.S.), Jan-Feb 85 (8½ pages)

Argues that many managers and staff professionals are not being helped by office automation (particularly word processing), because the time they utilise in document generation is often ignored or distorted in the quest for secretarial/typing productivity — while managerial productivity is being reduced. Presents typical activity profiles indicating relative times engaged in document generation/processing tasks and discusses their content particularly in terms of top/middle managers and professional/technical staff — as a basis for determining the type of electronic/human support required.

Enquiry processing. T. J. Hilty and R. M. Gwynn in Business Marketing (U.S.), Feb 85 (6 pages)

Describes how Reliance Electric (an Exxon subsidiary making power distribution equipment) has introduced a computerised advertising response-handling system aimed at better salesforce/prospect co-ordination, and building a comprehensive customer database. Outlines how the system works, the communications link with the field salesforce, and the added benefit of tele-marketing. Claims advantages in quicker response times and better tracking of potential customers. A related article describes a survey of initial inquiries to quantify the relationship between inquiry-producing advertising and resultant sales, which enabled the calculation of costs per sales lead and average sales return per advertising dollar.

These abstracts are condensed from the abstracting journals published by Anbar Management Publications. Licensed copies of the original articles may be obtained at £3 each (including VAT and p and p; cash with order) from Anbar, P.O. Box 23, Wembley HA9 8DJ.

TECHNOLOGY

EDITED BY ALAN CANE

Software buyers call the tune

Big companies know far more today about buying programs reports Alan Cane

A QUIET revolution has been changing the shape of the big computer software industry, obscured and overshadowed by the meteoric rise of micro-computer software companies like Microsoft and Lotus Development Corporation.

So dazzling have the prospects and potential of these fledgling companies been that it is often easy to forget that the software business was mature and soundly structured well before the first microprocessor saw the light of day. And according to the U.S. consultancy Input, quoted in the Fintech publication Software Markets, while the market for large computer software is worth $12bn this year, the figure for personal computer software is only $2bn.

Corresponding figures for 1989, according to Input, will be $29bn and $6bn.

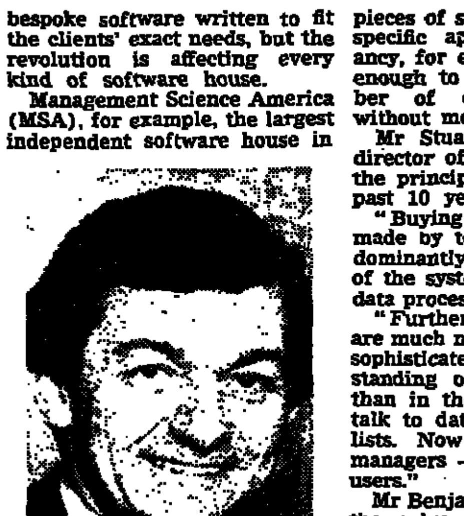
So for the foreseeable future, software will continue to be dominated by the big machines —even if the machines themselves become no bigger than filing cabinets.

The revolution is being fomented by customers who are significantly more knowledgeable and significantly more demanding than a decade ago.

Alan Benjamin, director of communications at CAP, a leading UK software house, says: "We used to say to our customers 'Here is the system specification we have drawn up for you. How do you like it?' Now we work with them to produce the system they want."

CAP is a specialist in bespoke software written to fit the clients' exact needs, but the revolution is affecting every kind of software house.

Management Science America (MSA), for example, the largest independent software house in the world with revenues last year of around $150m, is credited with popularising software application "packages," pieces of software designed for specific applications — accountancy, for example—yet general enough to be used by a number of different companies without modification.



Stuart Walsh: Users more sophisticated.

Mr Stuart Walsh, managing director of MSA UK, identifies the principal changes over the past 10 years.

"Buying decisions are being made by teams which are predominantly made up of users of the systems, rather than the data processing specialists.

"Furthermore, these users are much more senior and more sophisticated in their understanding of computer systems than in the past. We used to talk to data processing specialists. Now we talk to project managers — who are the real users."

Mr Benjamin says the systems themselves are becoming more complex with a heavy emphasis on communications and sophisticated peripherals.

There was a steady move to fixed price contracts which put pressure on software houses to work efficiently and to tight deadlines.

"What has happened is that software houses have changed. First they were simply body-shops, hiring out programmers to work on their clients' projects for a fee. Then they ran projects on their clients' premises working in organised teams. Now today, we undertake contracts, frequently as prime contractors."

Why do companies like CAP continue to write bespoke software when all the predictions have been that packages, supplied by companies like MSA with their attractive economies of scale would be the software of the future?

"People have been predicting the death of the custom-built system for years." Mr Benjamin says, "But many companies will not accept the package approach; they do not want to run their business like their neighbour's."

The move to fixed price contracts means that software houses are working more on their own premises using capital intensive methods to ensure their projects come in on time—powerful computer systems, project control software. There is a new emphasis on the prototyping of systems to test whether they come up to the customer's requirements.

With factory systems, this can be critical. Mr Benjamin tells of a warehousing system which used photoelectric cells for machine control. A mouse passed through one of the beams switching on a crane which trundled across the warehouse until it crashed into another crane. It was a two minute programming job to put the system right, but the consequences could have been serious if the system had been running live.

ENGINEERS at the Department of Trade and Industry's National Engineering Laboratory in East Kilbride, near Glasgo, have produced a set of software commands to control a team of robots in assembly jobs.

The program, called CONNEL, enables a technician to co-ordinate the operations of the robots with sensors that feed the machines information and other devices that may, for example, channel objects toward the robots grippers.

The three robots in the picture, all made by different manufacturers, are assembling glass fibre pieces into a pre-form needed to mould a car wheel from fibre-reinforced plastic. The robots could equally well do other assembly jobs, for instance putting together the components of an electric motor. With CONNEL, which is used in conjunction with a cheap microcomputer, workers can relay a list of commands to the robot system, for example to test the machines in a number of set routines and to check that the robots are receiving information correctly from sensors. The latter could be TV cameras that provide data to the robots about the position of objects they have to pick up.

The program includes a safety mechanism under which the complete system shuts down if any of the robots encounter an unexpected obstruction—a person who has wandered into the path of the machines' mechanical arms, for instance.

Integration is the key to modern programs

BLACK AND DECKER, the UK subsidiary of the U.S.-based hand tool and engineering group, is typical of the knowledgeable and experienced customer MSA and CAP are selling to these days.

It has placed an order worth more than £400,000 with MSA for a production management package to be installed at Black and Decker's manufacturing plant at Spennymoor, County Durham. The plan is that further MSA systems will be installed at the company's factories in the U.S. and Germany.

Mr Walsh of MSA says there are two principle differences in selling to a company like B&D today, compared with ten years ago.

First, he says, there is a much greater awareness of the need to integrate products —it was now understood that packages worked best when they were interdependent.

The MSA manufacture package, all 12 modules of it, was designed to run on B&D's midrange IBM mainframe at Spennymoor in co-operation with a database package called IDMS from Cullinet, a company specialising in systems software packages.

Second, there was strong interest in buying software which would prove a safe and reliable investment. According to Mr Steven Merry, B&D Systems Development Manager: "MSA's software was, in our view, ahead of the competition in its functionality and indications from the development team showed that it will stay ahead."

B&D is creating a £6m national distribution centre at Brackmills, Northampton and the contract for the materials handling equipment—stacker cranes, transfers cars, computers and so on—for the centre has gone to a consortium of Dexion, the prime contractor, and CAP which will provide the control systems.

CAP's share of the contract is just under £400,000.

Mr Benjamin of CAP underlines the communications content of the kind of project the company undertakes these days by pointing to the vital on-line link between B&D's head office mainframe computer in Slough and the national centre.

Integration, again, is the key. Orders are passed over the link activating the automated warehouse which controls the picking of handtools to satisfy the requirements of individual shipments. It also produces the delivery documentation.

This information is relayed back to head office to initiate production of invoices. From receipt of a customer order, CAP claims, the integrated system will allow shipment from the despatch dock within a single day.

Bid to improve engine economy

RESEARCH institutes and companies from West Germany, France and Britain are planning a £25m programme to produce designs for more efficient engines from studies of particles in motion.

The group, which wants the European Commission to put up some of the cash for the project, aims to examine the movement of molecules of gases in the combustion chamber of engines of cars or aeroplanes.

The results could lead to a better understanding of the processes that take place when gases burn, which ultimately could produce designs for new engines that consume less fuel.

Organisations that are discussing the programme include Stuttgart University, University College in Swansea, London's Imperial College and four companies — Renault and Dassault of France, Daimler Benz of West Germany and Britain's Rolls-Royce.

According to Professor John Argyris, head of the institute of computer applications at Stuttgart University, the project would require hugely complex calculations on a supercomputer such as an American-made Cray machine.

The group would do theoretical studies with the aid of the machine. For instance, they would attempt to work out how the gas molecules inside a combustion chamber interact with each other during the burning process.

The work would show how changes in the shape of the chamber or in the flow of fuel alters the rate at which the gases burn and so affects the efficiency of the engine. Studies with the computer would be backed up by experimental work on engines in test rigs.

With computers, engineers would try to assess the effect of different wing shapes in disturbing the flow of air. As a result, aerospace manufacturers could be helped in the design of new aircraft.

For Prof Argyris, the analysis of gas molecules would follow similar studies involving application of computers to work out the patterns of stresses in items as diverse as ice-breakers, escalators, buildings and cars.

Safety move in spills of chemicals

ACCIDENT victims in hazardous places of work could benefit from an emergency shower produced by Haws/Lennart Krusman AB of Tullinge, Sweden. The device has a special unit for washing eyes and the face and operates in sub zero temperatures at various water pressures.

The device can help people who have been scalded or splashed with dangerous chemicals. To help accident victims who may not be able to see clearly, the shower is operated by a pull-rod attached to an overhead lever.

Dr Bernt Aslund of Uppsala University has shown in studies that large quantities of fresh water are more useful in treating accidents than smaller units which simply channel water to localised parts of the body

Taking the strain . . .

A STRAIN gauge transducer sold by Shape Instruments of Reading employs a novel ceramic diaphragm that reacts to the pressure of gases or liquids.

The diaphragm, based on alumina, is moulded rather than machined. As a result, says Shape, it can be produced at relatively low cost. The diaphragm is tough enough to withstand a battering from many substances used in industry and is chemically inert.

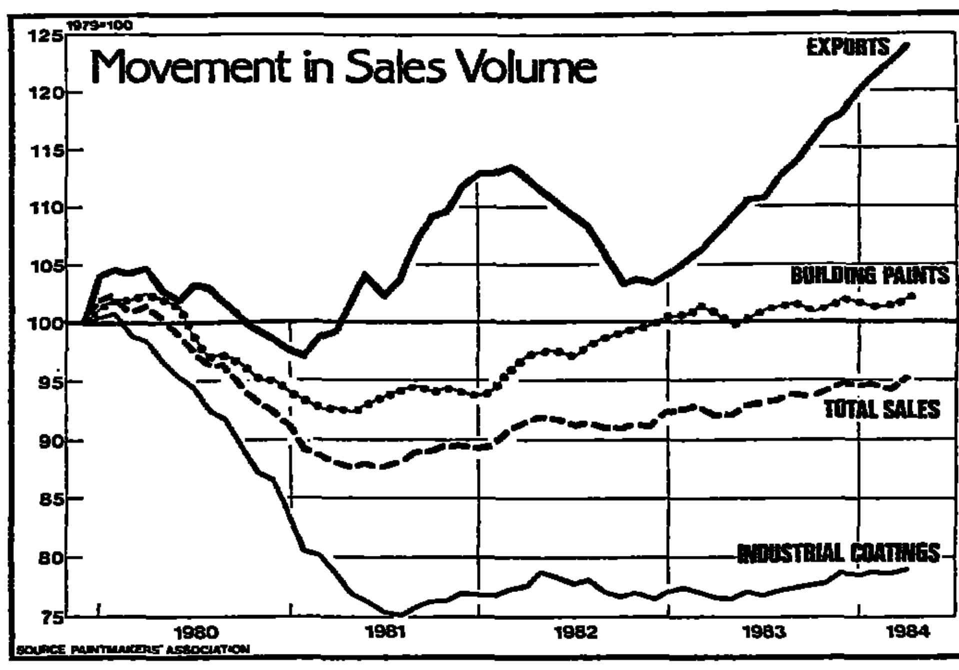
UK space consortium

THREE BRITISH companies are to form a consortium to offer services to the European space industry.

Information Technology, based in Winchester, is to join forces in the venture with RCA Services and Marconi Computer Systems. The group will help satellite companies to assess the reliability of space vehicles and to monitor satellites

FINANCIAL TIMES SURVEY
Monday June 24 1985

Industrial Paints



The effect of recession on paint sales has been dramatic, with the sales volume of industrial coatings dropping more than 20 per cent in 1980-81 and hardly recovering since. "The industry can only survive while our customers are making surfaces to paint," says Mr John Cox of the Macpherson Group. Export growth reflects the increasing internationalisation of the paint industry but the volume growth here has not been enough to compensate for lost business in domestic industrial markets.

Struggles for market share dominate an industry adjusting to rapid technological change, market fragmentation and tight margins in the teeth of recession

Restructuring for survival

IT IS a sign of the times Mr Hans Miver, president of the Swedish paintmaker Wilhelm Becker, is offered a paint company for sale about once a month. In West Germany, Herr Hans-Harald Grebe, sole owner of the innovative and burgeoning Weilburger Group, is approached frequently by multinational giants to sell out.

These are just two symptoms of widespread turmoil in the world's paint industry. According to Mr Jim Honan of ICI: "The industry has undergone more changes in the past five years than in the previous 30 to 40.

"Pressure will grow with the increasing emergence of plastics in the car industry and the technical problems of painting them. Only those who are fast, flexible and technologically advanced will survive."

Industrial paint has been affected by recession throughout the world because it can be sold only while manufacturing industry is making products with surfaces that need to be painted. In Britain, as elsewhere, sales volume plunged more than 20 per cent in 1981 and has bumped along the bottom ever since.

To make matters worse, prices have been static while raw material costs have risen steadily.

One result has been that margins are very tight—less than 5 per cent, says Mr John Asher of Crown. This makes market share crucial in all sectors, either to generate fast turnover in high-volume markets, or to maximise profitability in the low-volume, specialised ones.

The other result has been a fragmentation of the West's industrial paint market. "There are about 30 market segments now," Mr Asher says. Between three and seven companies compete in each segment in each country.

"Some segments can be subdivided, as between large drums, small drums and tubes, all of which are part of metal packaging. Some segments may be bigger than 1m litres.

"Everyone has to find the resources to innovate, but the typical development period for a new product is about five years. At the end of the day you scratch each other's eyes out for market share."

Mr Bill Collins, of Berger Britain, echoes this: "There has been a lot of market instability. Restructuring and market segmentation in the industrial field has moved from a national to an international scale.

"It is all linked closely to technology. In vehicle refinish alone we have to give service on about 10,000 colours. No one paint manufacturer, no matter how big, can afford to put R & D resources into all lines."

There is probably no such thing any longer as a general paint company able to supply any market. That includes world giants such as PPG and Du Pont in the U.S. and Hoechst, ICI and BASF in Europe, no matter how great the availability of cash resources from the chemicals industry to back them.

These pressures have fuelled an accelerating rush out of markets where companies are weak and a concentration into those where they are either already strong or see a clear chance of seizing leadership or a share in dominance. Some companies have decided to get out of paint altogether.

The biggest manifestation of these pressures was the sale of Inmont last month by United Technologies for $1bn to BASF, the West German chemicals company. The rationale behind the purchase was seen in terms of ink—BASF is the world's biggest inkmaker.

But the rationale is equally strong for some paint markets, especially the highly lucrative one in vehicle refinish. People will continue to crash and bump their cars, even if they do not buy so many new ones and even if the new cars are smaller with less surface to paint.

BASF is probably world leader here too, though there are wide variations in the company's position in markets about the globe. It almost certainly dominates in Western Europe — a third of the world market — and in Britain has leapt from about sixth to second place through owning Glasurit, Inmont and Valentine.

BASF bought Valentine UK last year, while ICI, which is trying to increase penetration in Continental paint markets, Valentine's operations in France. But when it comes to fighting on the acquistions battlefield, ICI's position in Britain is difficult, because in total paint sales it already outsells its nearest rival, International Paint, by about two to one.

Survey written by IAN HAMILTON FAZEY

This raises Monopolies Commission considerations. For example, it is already at or near the 25 per cent share of vehicle refinish in Britain that would have triggered monopoly investigation had it bought Valentine in the UK, even though ICI could be vulnerable to BASF in some technologically advanced sub-segments of the market.

ICI has also been divesting, however, selling its ACE business—heavy duty paints for agricultural, construction and earth-moving equipment — to the Donald Macpherson Group. This boosted the buyer's share of the ACE market in the UK to about 22 per cent.

This has put that business into Finnish hands. Tikkurila, the paintmaking subsidiary of the state-owned chemicals company Kemira Oy, last year bought Macpherson—the fourth biggest paint company in Britain—beating off bids by Becker and Yule Catto and paying an over-the-odds £25m.

The expansionist ideas of the thwarted Mr Hans Miver, of Wilhelm Becker, were soon revived when one of his monthly sale offers was from the Cookson Group. This wanted to divest itself of the Liverpool-based Goodlass Wall, the UK's sixth largest paint company.

Cookson kept 25 per cent of the equity but the acquisition gave Becker much-needed capacity to make resins and powder paint, plus one of GW's prize assets—the British rights to the U.S.-owned Valspar label in the trade and decorative sector.

Mr Miver says: "We needed to expand in all these areas. I don't think of it as a consolation prize for not getting Macpherson's. We had done a lot of homework on the industry. Goodlass Wall fitted in just as well."

Becker, which has 44 per cent of the Nordic industrial paints market, thus continues its European growth by acquisition. Previous major purchases have included Conway Coatings (UK), Wulfing (West Germany) and Bichon (France). Mr Miver says the alternative to becoming a multinational in its own right was for Becker to stay at home and wait to be taken over by a multinational.

But Becker, too, is rationalising. It is selling Wulfing's automotive business to PPG, acknowledging that it had insufficient strength to be other than an also-ran in that segment of the West German market.

Meanwhile, PPG has also bought International Paint's automotive business based in Ladywood, Birmingham. Both Wulfing and IP were licensees of PPG's electrocoat technology, where car bodies are painted using electro-chemical principles (a technology based on original work by ICI). The rival system is owned by Hoechst, of which Berger is the British arm.

All the other paint companies are attaching great significance to PPG's acquisition of parts of its former licensees, anticipating a fight with Hoechst—though PPG has yet to declare its hand.

Similarly, International's exit from car painting amazed many competitors, though Mr Eryl Morris, chief executive, cannot see why.

"We were in automotives in only two countries, the UK and Australia," he says. "We did not have the base to develop the business internationally. We thought it was right to get out.

"We want to grow in marine, where we remain the world market leader, and powder where we are already in the top three. We are on the look-out to buy but we are not going to spend for the sake of spending."

Much of the paint industry involves conservative little companies that probably will not survive in the long term. But there are still a lot — like Weilburger — worth buying because they have secured their positions in specialised, small markets by astute management and by keeping up the technology content of products.

Thus there are still about 276 companies in Britain, 350 in Spain, 250 in Germany, 235 in Italy and 231 in France, though in Britain polarisation between big and small is farther advanced than in most other comparable marktes. Two companies dominate a total of 30 per cent of the market, six control 65 per cent and 10 have 80 per cent.

By contrast, two West German companies control 20 per cent of the total domestic market while 15 have half between them. But Sweden now has only 10 paint companies and Mr Miver expects a similar degree of rationalisation in Europe eventually.

Paint is a formerly mundane product that has become a high technology, international business that has grown ever-tougher with the recession.

Mr John Cox, of Macpherson, sums it up: "We are all fighting like dogs over a bone. There is no volume and no growth.

"When I started in the industry you put on a primer, two basecoats and two finishing coats, with women hand-flattening with wet-and-dry cloths in between. Modern coatings are so advanced you need only one to do a better job. Less paint is being used and fewer items to put it on.

"Paint has become an aggressive, crazy industry."

Ecology controls are changing the way products are coated

High-tech aid to protect environment

PRESSURES ON the paint industry have come not only from increasing costs of raw materials and tighter markets in recession but also from the ecological lobby.

Paint used to be mainly solvent. When manufactured goods were painted the coating was cured by stoving and three-quarters of the "paint" went up the chimney. The cost of dealing with such effluent has grown as environmental controls have been toughened. There is also pressure to save energy by developing low-temperature curing.

Several trends have become clear as the industry has adjusted to increasing controls. All require high technological input and have militated against survival of smaller "stick and bucket" paint companies.

● An increase in the solids content of paint. The ultimate example is the development of powder paint, which is 100 per cent solids—a mixture of pigments and resin. The powder is usually applied by spraying through an electrostatic field onto an earthed object. Curing is by stoving although the object can be heated via electromagnetic induction, as in pipelines.

● Two-pack systems. The paint comes in two cans, when mixed, a chemical reaction starts polymerisation that transforms any paint into a continuous coating. Curing can be at temperatures as low as 70 deg C.

● Water-borne paints. Water replaces organic solvent as the means of carrying the pigment and resin so it can be spread over the surface being painted. What goes up the stack is water vapour and steam.

● Curing by electron beam (E-beam) or ultraviolet (UV) radiation.

Most of the leading companies have opted to follow some, but not all these trends. Some companies have decided not to compete in powder while aiming to excel in two-pack systems. Others have tried to develop coatings that will cure at lower temperatures.

Development of water-borne systems is seen by many as the most important area for development, however, since it will keep closer to the industry's traditional technological skills. It also enables low solids paints to be retained, with advantages of good properties and colour consistency in thin coats. They spread easily and produce more marketable colours, particularly for cars.

By contrast, powder paint requires much greater effort and control at the formulation stage (unlike liquid paint it cannot be corrected after mixing) and requires higher temperatures to achieve good flow, even cover and curing.

Two-pack systems have limited pot life as they harden in the mixing vessel: hours after the reaction.

Becker is one of the leaders in water-borne technology because the environmental lobby established itself quickest in Scandinavia. This could be important in the West German market, where environmental controls on smoke emissions are likely to become the toughest in the world in an attempt to minimise causes of forest defoliation.

Mr Brian Codling of ICI reckons the world market for vehicle repair at about 300m litres a year

ICI, however, has this month announced a breakthrough in water-borne paint for the motor industry and intends to centre its sales assault on European markets at Wiederhold, its West German subsidiary, based in Dusseldorf and Nuremburg.

To develop the system it calls Aquabase, ICI used its multinational clout by assembling a "world group" of its scientists doing joint research in the UK, Canada and West Germany. They solved the major problem of water-based paints, the effect of the ambient humidity.

The physical chemistry of Aquabase has what is called built-in rheological control, which enables the paint to adjust to atmospheric conditions and to dry consistently.

The paint has also been designed so that viscosity during spraying increases on impact with the car body. This mimics conventional systems, where solvent evaporates during spraying, and enables the same control over paint flow.

Drying is assisted by three minutes' exposure to air at 60 to 80 deg C. This time should be halved with new drying tunnel design. The system has also been perfected for vehicle re-finish paints.

ICI expects the main impact to be on new car lines, where painting and drying can be tailor-made, rather than modifications to existing lines.

POWDER PAINT is growing in popularity at the expense of liquids

Scramble for market share

THE MARKET for powder paint is growing by 15 per cent a year. But total industrial paint sales volumes have declined, then stagnated, throughout the recession.

Powder's new customers are coming from the liquid paint sector, according to Mr Brian Eyer, Croda Paints sales director.

"The market in industrial paints has declined by 25 per cent in six years," he says. "Powder already has a 12 to 14 per cent share of the 75 per cent that is left, so it is fair to say that use of liquid paint has almost halved since 1979."

Croda, part of Croda International the UK chemicals company, is one of Britain's smaller paint companies, turning over less than £18m a year. Like others of its size, it survives by identifying market niches and trying to improve what it offers in those where it is already strong.

This has helped it take about 6 per cent of the UK powder market, and it claims leadership in the "hammer" and "antique" finishes popular on products such as gas fires.

Earthed

Such detailed marketing management is only a nicety in the scramble for a share in powder's widening markets, however. The larger companies are fighting here, if only to ensure that turnover is not lost if customers switch to liquid paint. The fight among the big companies could be to the death, with large corporate resources underwriting price-fighting in national and international markets.

"Nobody is making money out of powder," one leading figure in the industry observed. "In Germany, nearly everyone is making losses. Some of the large companies are hoping to win by attrition."

The advantages of using powder are largely environmental. The powder is sprayed on to an earthed metal object with an electrostatic gun which makes it coat evenly. Hard curing is done in an oven or, in the case of pipelines, by heating with electromagnetic induction, so the paint cures as the powder precipitates.

If the resin which carries the pigment is designed to coalesce into globules under heat, this creates textured, hammer or antique finishes. Otherwise, smooth, relatively thick surfaces result: common examples are aluminium windowframes and the colourful metalwork in high-tech architecture.

There is no solvent, so no gas effluent is created. Unused powder can be collected and used again, so there is little waste and no liquid effluent to treat. This has proved attractive to manufacturers of indoor metal goods, which do not have to withstand weathering.

But there are problems. Paint shops cannot be converted from "wet" to "dry," so new investment is required. And at the manufacturing end, formulation has to be right at the mixing stage, with little margin for error. It is not like liquid paint, where colour or contents can be adjusted before canning.

Unless a company can find the sort of market niche not worth big companies' trouble, only large concerns will be able to survive in powder because of the need for high technological expertise, and the financial resources to survive low or no margins in the price war. So who leads?

Mr John Cox, of Macpherson, says: "We lead in powder coatings although there can't be a whisker in it between ourselves and International Paint. We have bigger manufacturing capacity and supply more segments."

But International Paint is playing for bigger stages than the UK market. Mr Eryl Morris, chief executive, says: "In powder we are probably in the top three worldwide, with investment in new plant in Houston and South Korea.

"We have manufacturing operations in UK, Germany, France, Brazil (where we are market leaders) and Australia. Ahead of us in pipeline powders is 3M, but we are well established in heavy duty and thin films."

Meanwhile by taking over Goodlass Wall, Becker has strengthened its position in UK powder markets. It has not only added 3 per cent to its 5 per cent overall UK market share, but is doing so in the potentially heavy duty market, with the prospect of lucrative pipeline business.

The company says its powder sales are growing at 20 per cent a year, well ahead of market growth. It was straining its present capacity, in spite of £300,000 invested in a new UK factory since 1980. But about 30 per cent of Goodlass Wall's capacity is spare, and this should take care of Becker's needs for three years.

Powder was one reason Becker wanted to buy Macpherson, which has plans for some niches as well as producing powder for larger volume markets.

Mr Cox says: "We intend to invest heavily in powder. We have acquired a site in Aldridge and should soon have the most modern production line anywhere.

Leadership

"We shall have capacity, but that is less important than flexibility. What you need is the capability to fill a wide mixture of small orders and for that you need modern plant.

"We have many customers who are moving to powder. We missed out on some specialised areas earlier but soon we will be able to service the specialised markets too."

Macphersons and International are neck-and-neck at about 14 per cent each of the British powder market. The Postans Group, however, can lay claim to leadership with about 19 per cent if the volume of its Syntha Pulvin company is added to the powders Postans sells to the metal shelving industry and to Thorn for appliances.

Syntha Pulvin, a proprietary powder coating system, accounts for about 35 per cent of sales. Mr Stephen Jacques, marketing manager, says: "We have 85 per cent of the architectural market, mainly aluminium windows."

Syntha Pulvin is largely responsible for the bright colours on the aluminium window frames of modern buildings. But its most widely seen use is probably the white framework of the six storeys of silver glass curtain-walling on the office block at Milton Keynes central station.

Such coatings are marketed directly to architects and specifiers rather than window manufacturers or trade coaters. Croda, too, uses similar "back-selling" techniques to designers, pushing the potential attractivenes of finishes.

So design rather than manufacturing advantages is a key factor in some market sectors, although Croda has also developed a low bake resin system which cures at 100-120 deg C rather than the more normal 160 deg C.

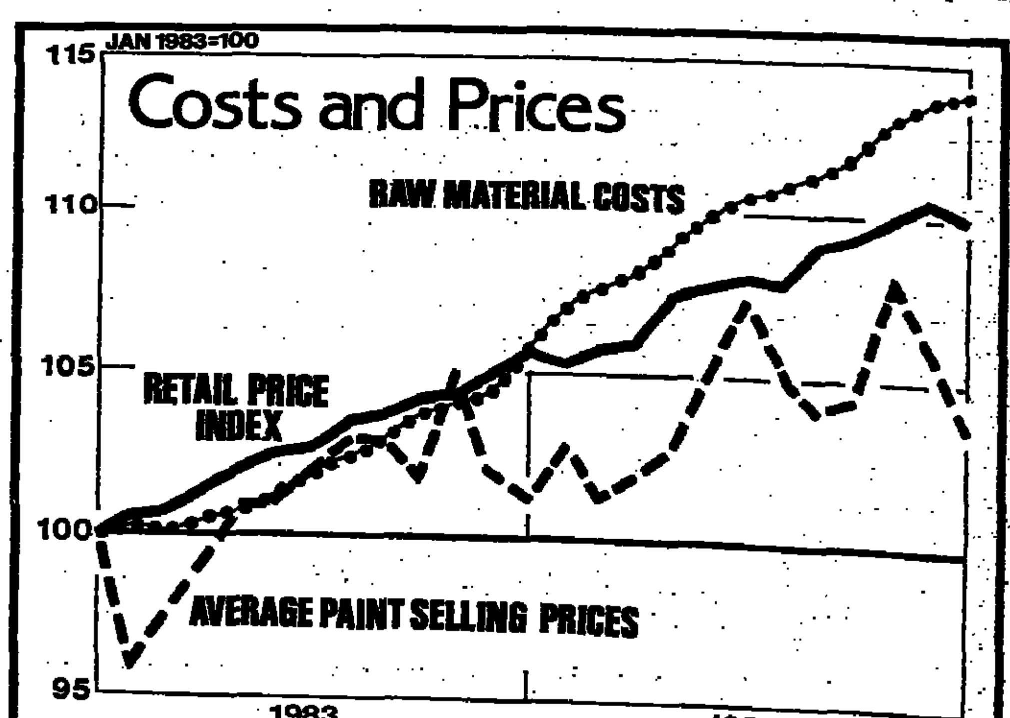
"Energy for the ovens was costing more than the paint in some plants," Mr Eyers says.

The continuing switch to powder has involved tools, agricultural drills, lawnmowers, filing cabinets, metal casings and general office equipment among other manufactured products.

All the companies involved see concrete reinforcing bars and steel joists as the next big worldwide market. Structural failure may be the eventual price of not protecting rebars, some of which are already beginning to corrode.

Some believe that legislation will force the issue, overcoming the unanswerable conundrum of whether the construction industry or its customers should pay for costlier components.

The powder makers probably will not care: whoever pays, here is a new market, not one replacing lost liquid volumes. This should mean real profit.



Paint companies' margins are being squeezed by rising raw materials prices. A combination of recession and over-supply is preventing compensatory price rises. This is helping to fuel rationalisation of the industry as companies drop out of markets where they are not strong enough to generate worthwhile volume.

Vehicle repair, one of the most lucrative sectors, is adjusting to a $1bn deal

Takeover shake-up

REPAIR OF damaged vehicles is one of the most important and lucrative paint markets in the industry.

"People are not only going to continue to own cars but also to crash them. Vehicle re-finish (VR) will remain very big business," said Mr Bill Collins of Berger Britain.

Mr Brian Codling, general manager of the VR business area for ICI, reckons the worldwide market at about 300m litres of paint per year. An average price of £4 a litre makes it worthwhile for the paints giants to fight for every tenth of 1 per cent of share, for even such a morsel is worth about £1.2m.

This is why the $1bn purchase last month of the U.S. paint and ink maker Inmont by West Germany's BASF is important.

Inmont and BASF were among the eight paintmakers controlling more than 70 per cent of the world market. Inmont was second to Du Pont, the U.S. chemicals multinational with a 9 per cent share, and BASF seventh with 7 per cent, some sources say.

Combining the two shares should theoretically make BASF world market leader over Du Pont's 15 per cent.

Falling

Those shares may still seem small enough for the world situation to appear competitive, but reality is different because of geographical variations. In North America, which comprises about one-third of the market, Du Pont is believed to have a 36 per cent share and Sherwin Williams about 21 per cent. BASF was doing little more than buying Inmont's share, thought to be about 13 per cent.

In Europe, another third of the market, BASF probably had an overall 15 per cent, to which it has now added Inmont's estimated 7 per cent. The Hoechst group, which includes Herberts and Berger, was the leader, but probably had less than 20 per cent.

In Britain, BASF owns Glasurit, which had 8 per cent of local markets in 1983. Last year it bought the UK operations of Valentine, which had a falling 11 per cent of the British market (its share is thought to have halved in 10 years). Inmont in the UK was about the same size as Glasurit.

Theoretically, BASF has agglomerated about 27 per cent of the British market, giving it leadership over ICI which claims between 22 and 25 per cent. But this is almost certainly not the case, because mergers lead to rationalisation and much of Valentine's share was shaky as a result of older technology and less well-founded distribution.

Thus ICI says that it did not want Valentine in the UK when the group was up for sale last year, contenting itself with buying Valentine's operations in France. However, Monopoly Commission considerations also affected the decision not to buy.

Berger says that the breakdown of British market shares is now: ICI 24 per cent, Glasurit 20, Berger 18, Ault & Wibourg (owned by Sun Chemicals) 16, and Sikkens, the Dutch paint company, 10. This amounts to 88 per cent of the British market.

Other sources would give ICI and Glasurit a point or two more, mainly at Sikkens expense, and swap Berger and Ault & Wibourg's places.

ICI is overall market leader outside North America and Europe. This also comprises a third of the total market and ICI, which manufactures in 20 countries and sells in 47, is believed to have about 15 per cent.

There are marked regional variations, with Berger claiming pre-eminence in total paint markets in areas like the Indian subcontinent and the Caribbean. But overall, the combined sales of BASF and Inmont give the West German group second place, and put its share well into double figures.

ICI is not taking these developments lying down. Long before the Inmont takeover it had shaken up the management of VR with the appointment of Mr Codling, whose image is rather like a promising heavyweight. The new BASF grouping will make his job tougher but the key elements of strategy have already been defined.

These revolve round securing a firmer worldwide base by improving penetration of U.S. and Continental markets and upping investment and expenditure on research and development.

ICI is spending £8m over two years on investment for the European market, including training for applicators (operators responsible for applying paint), new colour and development laboratories and a new factory at Stowmarket, due to open next year.

Narrow

Having the best colour-matching facilities is a key R & D objective. Ironically, Mr Codling says that penetration of the British car market by foreign companies is going to prove an advantage because the range of vehicles and paints is so wide as to give any British-based company the best refinishing "library" in the world.

By contrast the Japanese, who have a narrow range of imported cars to learn on, are hardly in the VR market. Their colour consistency on new cars is sniffed at by European paintmakers anyway.

Mr Codling says: "The number of colours in a place like Japan is very small. Complexity of colour has been increasing. There were 10 colours for cars in 1946, 12,000 in 1971 and 26,000 in 1984.

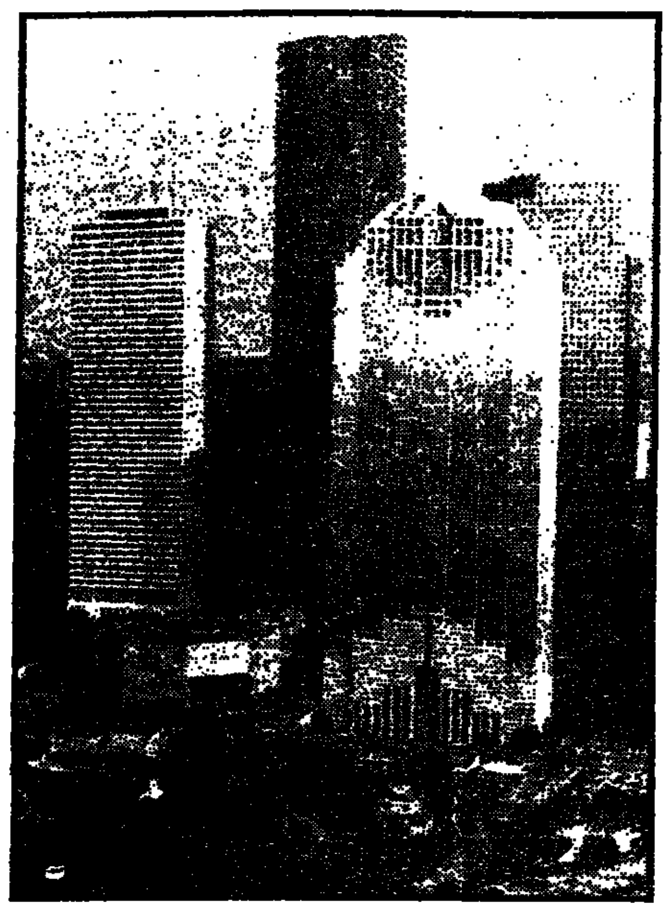
"In 1971, 34 per cent of colours were available via mixing schemes. By 1984 the proportion was 80 per cent from 50 basics."

All the companies are spending a lot on mixing systems and training, which means high technology will be an increasing requirement among applicators, spelling doom to the traditional British "under the railway arches" businesses.

This will almost certainly push up the price of repairs, with discomfort to insurance companies and temptation among applicators to skimp on health and safety. Therefore a search for safer, more economic paint systems is also a high R & D priority.

ICI's new water-borne paints could be important in the long term, though the technical and financial resources needed illustrate why the VR business is now in the hands of so few big companies.

And with stakes so high it is no wonder BASF's acquisition of Inmont is so unsettling.



Most of the curtain walls in central Houston are being coated with Pennwalt resin systems

PROFILE: BERGER BRITAIN

Divide and conquer

THERE HAVE been significant developments within Berger's UK operations in the last two years. A thorough-going reorganisation has been taking place, with top managerial changes and segmentation of the business to match markets.

Coupled with extensive modernisation, Berger now expects to consolidate and expand across a wide range of industrial coatings. Competitors, who two years ago were openly questioning Berger's prospects, are now being much more careful in what they say.

The promotion of Mr Bill Collins to supervising director of Berger Britain is part of the change. He made his name in one area where Berger has been highly successful—as chief executive of Cuprinol. At the same time, Mr Philip Medcalf has become marketing director for the UK region, from doing a similar job in overseas markets, and Mr Stanley Hough has joined from ICI to run industrial coatings.

This is not to say that Berger was not successful before, for it has many outstanding products. But Mr Collins acknowledges that its largely centralised management structure was not well suited to competing effectively in an era of increasing market segmentation.

The result is that at Berger Britain—the new name for Berger in the UK—there are now eight profit centres, each with its own marketing team. Three of these are in consumer markets—decorative, retail and woodchip papers—but the others are all aimed at specific industrial segments.

Industrial coatings, with automotive and vehicle re-

BERGER

finish at its core, is the biggest, and Cuprinol, the market leader in wood protection, remains a profit centre in its own right. The other three are elastomers, resinous chemicals and traffic markings. The chances are that the white lines on the road and the reflective paint on traffic cones came from Berger.

The present Berger group was formed when Berger Jensen and Nicholson acquired British Paints in 1969. A year later Berger joined the Hoechst group, owner of the German paint giant Herberts, with all the access to Hoechst technology that brought.

Today Berger turns over £350m worldwide via 45 companies in 25 countries. It defines its geographical market as the UK, the Pacific and the Caribbean—much of the old British Empire. It keeps out of the rest of Europe, leaving that to Hoechst.

Berger Britain and the Australasian sector are about of equal size and account for £260m, 70 per cent of it decorative and retail sectors. Mr Collins admits that it was marketing weakness in the decorative areas that caused the loss of share that prompted Berger's changes.

But that does not mean that Berger has been content to rest on its industrial laurels, as the segmentation of the company shows. The investment programme also proves the point, with closures of old plant in Newcastle, Dagenham and Stratford, East London. A new London factory has been designed to enhance quality and consistency, the latter being crucial for automotive paints applied by robots.

This, combined with Hoechst's electrocoat technology, has given Mr Collins the confidence to make an important prediction. "We will get Nissan," he says.

FLUOROCARBON paints, with their indestructible properties, are being offered in a new form

Sprayers aim to blow away powders

FLUOROCARBON-based paints are set to enter a new battleground. Sigma Coatings, the Petrofina subsidiary, is pushing the idea of using them in spray coating as well as in coil coating where they have already established a strong market position.

Coil coating, a roller-based system of painting, is the principal means of applying these paints.

The fluorocarbon resin which carries the pigment is polyvinylidene fluoride (PVDF), of which the U.S. company Pennwalt is almost the world's sole supplier.

The resin is expensive but practically indestructible. This has led to superior weathering for steel coil coated with only thin layers of paint. Any colour or hue can be guaranteed also not to fade even in desert sun. Accelerated weather testing even suggests that the forecast time of more than 30 years to first maintenance may be pessimistic.

Such properties have led to most of the curtain walling on downtown Houston's new skyscrapers being coil coated in Pennwalt-supplied resin systems. The coatings can make relatively low-priced steel sheet look like more expensive anodised aluminium while weathering just as well.

Mr Louis McCulloch of Sigma says: "Our product has been designed for spray, and is not an offshoot of coil technology, which is the case with our only likely competitors — ICI, Becker and PPG. It's a very small market but we have sold 10 times as many litres in 1985 as in 1984."

Target for the spray is architectural aluminium, a market dominated by Syntha Pulvin powder coatings. Mr McCulloch says: "PVDF will give better colour, longer life and better weather resistance, better gloss retention and resistance to chalking, as well as superior UV resistance. The Middle East looks a likely strong market."

Mr John Gattley, director of Pennwalt in the UK backs this up. "The enthusiasm for PVDF coatings is continuing to rise. We sold more in the past year than in the previous two.

"Spray-based systems are a good alternative to powder but more expensive. However, the performance is worth the price. What is the point of a 20-year warranty on a building if the windows will last for only three years?"

Mr Stephen Jacques, Syntha Pulvin marketing manager refutes this, pointing to 10-year warranties on architectural aluminium coated with his company's products and brandishing an Agrément certificate for 30 years.

But what of Syntha Pulvin's "orange peel" look and lack of subdued colours?

"We have a range of beiges and whites," Mr Jacques says. "We can formulate any colour anyone wants. However, we expect spray-coated PVDF to become popular with some architects who want matt finishes, though we introduced a matt product ourselves last year."

Architects and specifiers hold one of the keys to the market's development. PPC, the giant U.S. paint company is promoting its Duramar fluorcarbons directly to specifiers and Pennwalt is vigorous in explaining PVDF properties to architects. The range and subtlety of available colours and their effect on design standards will influence some of them.

The other key to the market lies in availability of the right sort of trade-coating capacity: the system requires high stoving temperatures to cure the coatings and such facilities are not available in smaller workshops.

Mr McCuloch says that when sprayed PVDF was specified for part of Gatwick Airport's new terminal the work went abroad because of a shortage of such capacity in Britain. It may need investment by a paint company to help a UK coater into the marketplace.

Plastics: bumper time for colour co-ordinating and sprayed textures

Leathering for cars

THE FRONT and back bumpers on the Rover 200 series of cars are an important step forward for paint. They are made of plastic and when the new Rovers were at the final design stage in 1983, Austin Rover asked ICI if a way could be found to paint them.

This was felt important to the car's chances. It would enable stylists to achieve a "co-ordinated" look, matching the bumpers to the rest of the car. Colouring the plastic during manufacture would not work because of consistency and matching problems.

The plastic is a modified high-density polypropylene which is shatterproof, deformable and tough, making it ideal bumper material. The mould is made by Honda and the plastic by ICI in Britain and Mitsubishi in Japan.

When it was found paint would not stick, it took ICI a year to develop an adhesive promoting primer that would adhere to the plastic. The paint then sticks to the primer.

The result is that apart from a little cosmetic trim, Rover 200's are the same colour all over.

Mr David Clark, technical service manager for ICI automotive paints, says the implications are likely to be considerable.

"The car bumper is the thing everyone is learning on. Car-making is going to go back to a frame on which panels and bolt-on wings are hung. The frame will be steel for safety but the wings and panels can be made of anything."

Use of plastics inside vehicles, where materials are usually more easily painted, is also increasing.

"Stylists like plastic because you can make shapes which cannot be produced out of metal," Mr Clark says. "There is less weight and engineering costs are lower because you can avoid operations like eight-stage bending and welding.

"It also means faster retooling for new models and it is very much easier to modify the mould."

The right paint can also make all the difference to plastic's image. "The plastic car won't be nasty and it will be cheaper because of significant savings on material costs and energy," Mr Clark says.

The latest coating for plastic being developed by West Germany's oldest paint company, Schramm Lacke of Offenbach, is called Soft-feel. Sprayed onto injection-moulded parts, it can make plastic look and feel like leather.

Schramm is part of the Grebe Group and technical staff at its stablemate company, Weilburer Lackfabrik, were last month passing round the boardroom a new additive for Soft-feel—a perfume that will make it smell like leather too.

Coating

The new paint is already being suplied to Volkswagen-Audi for an injection-moulded interior part giving a leather-like "grain" in the plastic and a "stitching" seam.

A thin primer smooths injection marks on the moulding and an 80-micron layer of Soft-feel is sprayed on. This cures in about 20 minutes when stoved at 80 deg C producing a film thick enough to feel like a layer of leather. But it is thin enough not to fill the "grain" marks.

Ford's Berlin plant has taken a supply and talks are taking place with Ford UK. The coating can also be used on plain plastic to give a texture like velvet. Schramm expects to replace laminates in car interiors with the coating, as well as taking market share from injected foam.

Herr Hans-Harald Grebe, Schramm's owner and chief executive, says: "We spent nearly three years developing Soft-feel. We can also take it into furniture, radio, TV and desks. Secretaries complain of bruising their knees on modesty boards—this will stop that."

Becker, the Swedish paint group, also sees painting of plastics as likely big business. Mr Sten Skoog, general manager responsible for Becker's European marketing, says: "We put a lot of resources into this area in the mid- to late-1970s and *know a lot about it.*"

The company has beefed-up its research and development department, now headed by an expert in the field.

Mr Geoff Longstaff, who heads Becker's British operations, says: "We expect to see markets open for painted plastics in radio, TV, computers and electronics."

Like ICI, the Macpherson Group expects to be able to use its plastics companies to enhance its approach to the industrial market. Mr John Cox, head of Macpherson Industrial Coatings, says: "It's more than painting. We are looking at the whole component, from raw materials to the final coating and offering total technology.

"We have about 20 applications on trial with various companies. We expect this to be a big area for growth."

Because paints are put on to plastic they have to be cured at relatively low temperatures. This forces chemists to develop a coating that will be robust enough for many industrial uses, but the energy savings in production are considerable. Stoving temperatures for paint on existing bases such as steel may be 50 per cent higher.

This will reduce costs of finished goods. Austin-Rover is trying to stay in business by using technology to compete and the Rover 200 plastic painted bumpers are the first of their kind. ICI is also working on a plastic fender for the Maestro.

Mr Clark admits that a lot of smaller paint companies have been painting plastics for some time — but their prices have reflected their lack of economies of scale.

"We are in high-tech, high-volume markets," he says. The advent of the big companies should move the painting of plastics into a new era.

Colour matching for the new plastic bumpers on *Austin Rover cars* was achieved through an ICI development

PROFILE: DONALD MACPHERSON GROUP

A fight to the Finnish

THE Donald Macpherson Group is most widely known for the decorative paints it retails through Woolworth, but one-third of its £120m-plus turnover is in industrial coatings. This was a major attraction in the takeover battle for the group last year.

The fight ended with victory for Tikkurila, the paint subsidiary of Kemira Oy, the state-owned Finnish chemicals corporation, but most of the early running was made by the Swedish paintmaker, Wilhelm Becker, which dropped out when the conglomerate Yule Catto entered the fray.

Tikkurila then swooped at the last minute with a £25m offer—a price which Becker and other leading paint companies still find astounding for a company that made only £1.7m pre-tax profit in the 14 months to the end of 1984.

But Macpherson sales were well spread last year—£85m in the UK, £13m in Europe, £11m in the Far East and Australasia, slightly less in the Americas and nearly £7m in the Middle East, Asia and Africa. For Tikkurila, flush with cash and profitability and anxious to burst out of the Nordic market, Macpherson remains a very cost-effective way into UK, European and world industrial paint makers.

The Finnish company is determined to use Macpherson as its western European springboard. It is already a major exporter of automotive coatings to the Soviet Union.

Next week, a year after completing the takeover, reorganisation of Macpherson's former single industrial division will be completed with the creation of four separate market-orientated companies. These are: woodfinishing and paper coating; powder; wet metal and other general industrial coatings; and urethane elastomers and polyester plasticisers.

Powder, which is easily exportable, is seen as a critically important world product and Macpherson already claims to make a quarter of Britain's total production, disputing claims for leadership in manufacturing with International Paint. Both companies are now investing heavily.

Macpherson is also consolidating its grip in the ACE market — the heavy duty paint for agricultural, construction and earthmoving equipment. In March it announced it was buying ICI's business and dedicated technology in ACE.

At the same time, Tikkurila has said that there will be considerable investment in Macpherson plant to improve productivity and profitability.

Mr Tony Close, company secretary, says: "Tikkurila is very strong on automated production and high technology production techniques. Many experienced managers would be amazed at the standards in the Finnish factory. The intention is to bring UK plant up to these."

Mr Close says that Tikkurila also intends to put a lot of pure R & D into Macpherson, which traditionally has used its scientific staff as technical support in the marketplace, rather than in fundamental development areas.

Research areas where Tikkurila is strong include paint film porosity, which has led to development of efficient vapour barriers. Water-borne systems are also being studied, as are ultraviolet curing of paints and varnishes, resin production methods, corrosion prevention, and low-bake stoving enamels.

PROFILE: CROWN

Concentrating on tomorrow

Crown paints

MR JOHN ASHER, director of Crown's industrial division, is the first to admit that sales volumes have been static in the company's main markets for the past few years.

"We are in areas where we have a knowledge of the market and how to service it," he says. "It would be wrong to say we have sailed through the recession but we have come through in fine shape. We have concentrated on tomorrow's technology and did not try to defend smoke stack industries."

Rationalisation of the industry, he says, is solving the old problem of too many paintmakers in too many markets. "There has been a move towards increasing specialisation. Not a single paint supplier can afford to cover everything," he says.

In Crown's case this has meant concentration into four main areas of industrial business—coil coating, water-based materials, radiation cured systems and powder. "After that we're in market niches and don't fight in bulk markets," says Mr Asher.

Coil coating is, in fact, steady business for Crown because it is one of the main suppliers of plastisol to British Steel. This coating is the workhorse of the coil industry in Britain, where the steel coil it protects is cut into lengths and converted into profiled claddings for the construction industry.

But Crown is also big at the small end of the coil industry as one of the pioneers of high performance, heat resistant coatings for cookware and bakeware. The coating is applied to unrolled steel coil and cured at high temperatures. The product is then pressed out of the coated steel, with no need for further finishing.

Crown put a lot of work into these coil areas in the *early days of the industry's* growth and has seen it pay off. It has done similar development on radiation curing and water-based materials in the areas it knows well—clear finishes and lacquers for paper, wood and plastics, and laminating adhesives.

The sort of benefits this brings to adhesives customers is obvious—a cost of 2.9p per sq metre against 3.4p for solvent-based systems. This has seen use of such water-based materials grow from less than 3 per cent of the market in 1976 to nearly 10 per cent now. Mr Asher sees the figure at 16 per cent in the early 1990s. Crown expects its work to give it a lucrative share of this.

Meanwhile, Crown's profile is very high in some other areas. One of the niches it has identified is the painting of concrete with maintenance-free coatings (the rain does the cleaning). The attractively refurbished Birmingham Telecom Tower is one of the first, and most prominent, examples.

The company reckons it will take five years to establish painted concrete as a new market, but with many existing concrete structures and buildings looking decidely tatty these days, it may take off faster than that.

PROFILE: INTERNATIONAL PAINTS

Marketing shift may be leap in the dark

International Paint

IN A significant shift of marketing stance, International Paint has set off in pursuit of the small business sector, which it says is worth between £50m and £90m a year.

Like most paint giant's, International has been interested only in supplying large volumes. The move reflects the *depressed state of the market.*

The company has put £3m into centres in Newcastle, Birmingham and London, each of which has a computer system for colour control and customer accounts. Other centres are planned to cover the whole country.

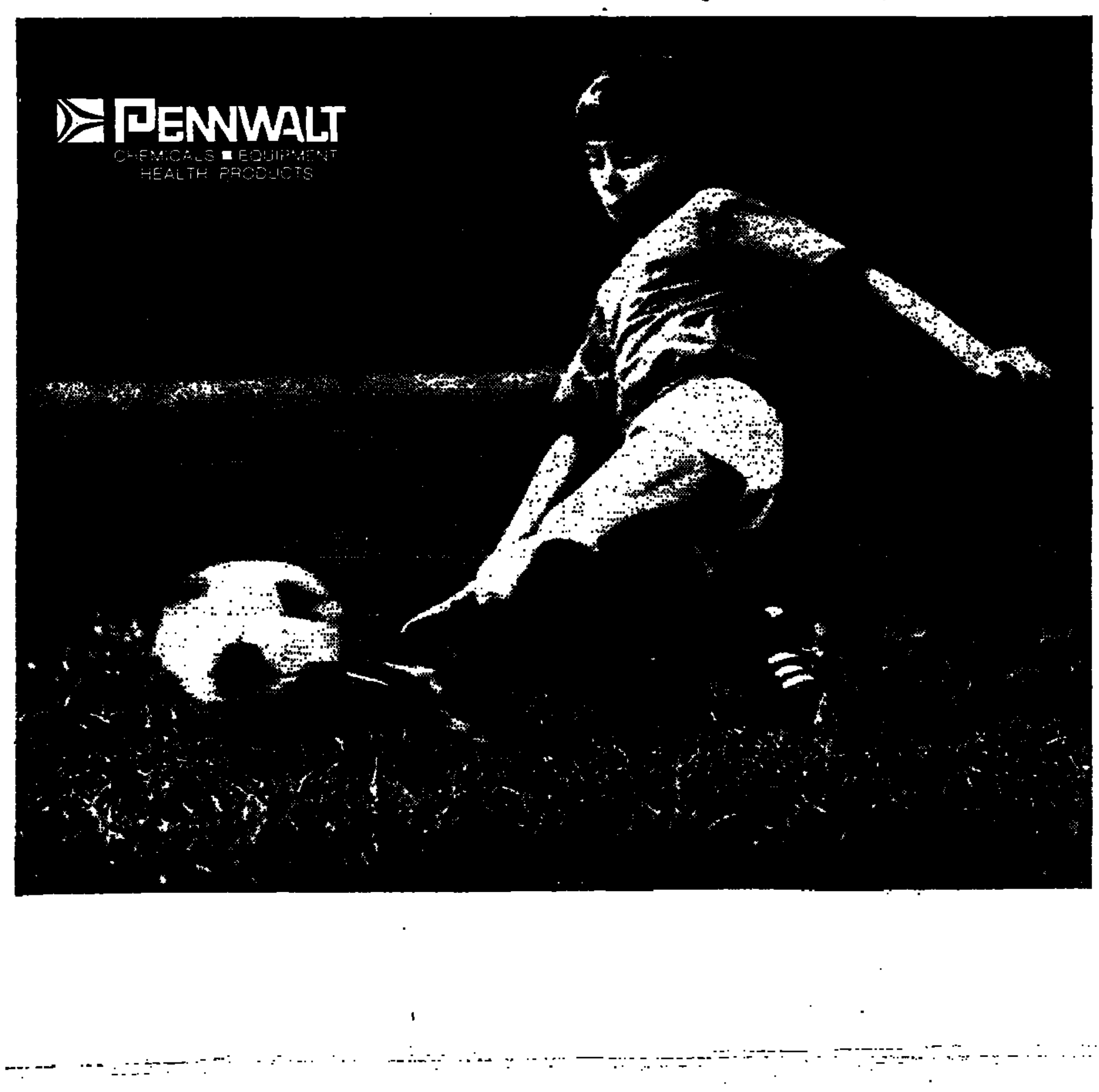
The technology makes it economic to mix and supply a wide range of colours in various types of paint at competitive prices but in small quantities. A range of powders has recently been added.

Although each centre has been designed with what the company calls an "up-market" shop front that allows over-the-counter transactions, most customers have their paint delivered under normal trade credit terms. International claims a 24 to 48-hour service and quotes small business customers who say the new centres have eliminated problems of avilability and delay.

The move will be seen in some parts of the industry as a threat to smaller paint companies which exist because they are willing to supply small quantities, often to customers as small as themselves. Lack of economy of scale is usually reflected in price and delivery times, with special colours or requirements costing more and taking longer.

The centres are also different from other large companies' "trade" outlets, which are usually concerned with sales of decorative paints rather than industrial coatings. The change is to International's marketing mix, creating new places of sale to reach an untapped market.

The company's vagueness about the potential *size* of the market, however, indicates that this could be a leap in the dark.



THE ARTS

Architecture/Colin Amery

The BBC needs Foster's foresight

Last week the architect Mr Norman Foster received a telephone call in Hong Kong from Mr Stuart Young, chairman of the BBC, who gave him the bad news that plans to build on the Langham Hotel site opposite Broadcasting House had been abandoned.

Norman Foster has been working for three years on plans to build a new broadcasting centre for BBC radio. He was selected from a short list, when the late Lord Howard was the BBC's chairman, on the strength of his firm's undoubted skills in solving the complicated problems of inserting highly serviced buildings into existing urban sites.

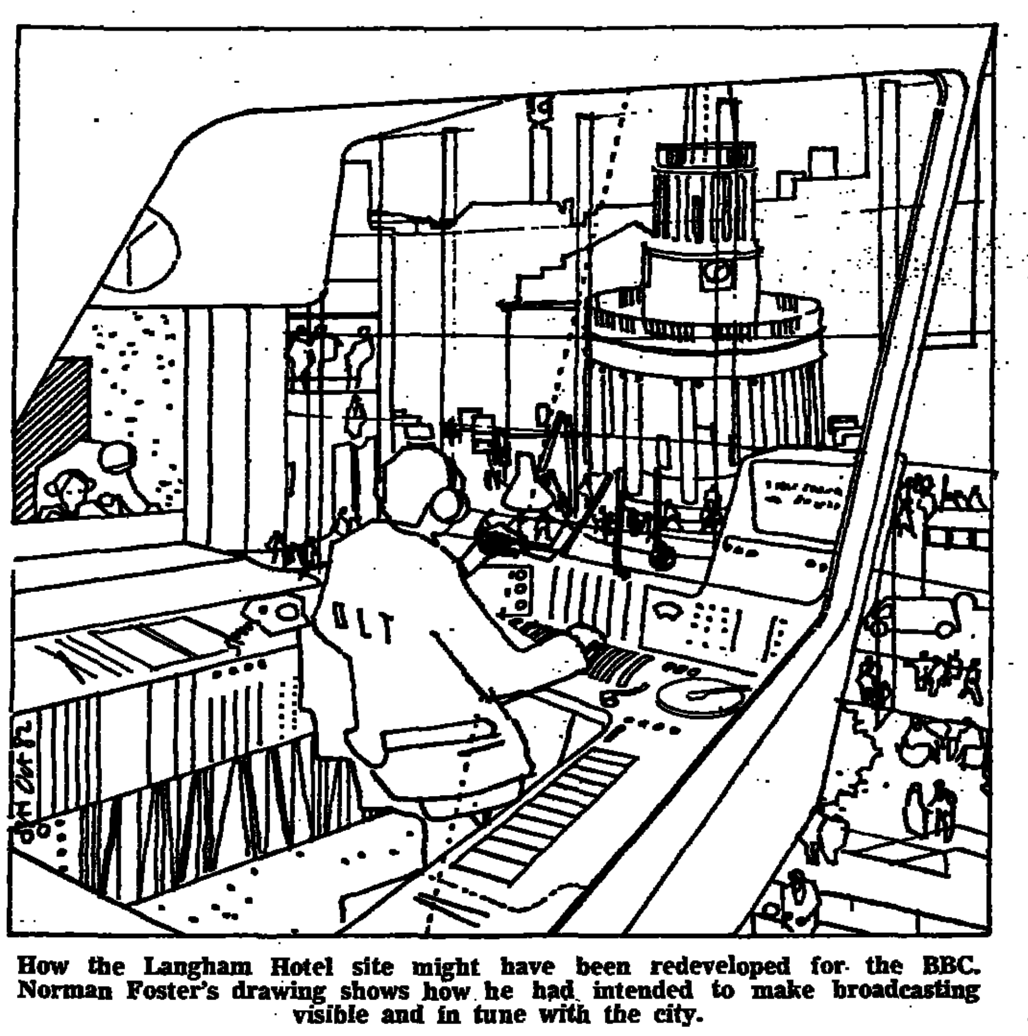
Foster Associates have produced some of the most interesting new structures in the world. In Norman Foster they have a man who is a brilliant problem solver. He applies his own almost obsessive fascination with the advance of design technology to almost any problem and usually produces a revolutionary answer.

The BBC, in its wisdom, has decided to buy 16 acres of land at White City. It is a site with room for expansion, where new buildings can be speedily erected—but is a suburban site, something of a retreat from the metropolitan presence now enjoyed by BBC radio at the hub of the capital.

There is an awful irony in the decision for Foster Associates. They have been analysing the BBC's needs in some detail and were naturally critical of the Corporation's occupation of some 1m sq ft of office and studio space at some 20 different locations in London. The Langham site had its problems but Foster Associates had shown they were not insoluble. In their solution they had demonstrated that in the sensitive heart of London a new *building could be built which* would have been an elegant and exciting addition to the capital, although a tight squeeze.

Foster Associates' approach to architecture can be seen and thoroughly understood in a major exhibition that opens today.

Foster Associates — Six Projects is to be seen at the Sainsbury Centre for the Visual Arts at the University of East Anglia, near Norwich until September 11 (opening hours are Tuesday to Sunday, 12 to 5 pm). I highly recommend a visit because it presents a unique opportunity to see Foster's own Sainsbury Centre which was completed in 1978, and to explore the development of the practice's work in the setting *of that remarkable building.*



How the Langham Hotel site might have been redeveloped for the BBC. Norman Foster's drawing shows how he had intended to make broadcasting visible and in tune with the city.

Alas, the BBC proposals, which had reached a state of preparedness to be submitted for planning permission, will not be in this exhibition. I hope *very much they can be unveiled* to the public as soon as possible because they are a particularly relevant example of "architectural problem-solving" within the city and a demonstration of the development of this sane and rational practice.

When they are shown I hope that the preliminary response—an account of the architect's initial approach to this technically complex problem—will be prominent alongside the more finished models and plans.

Foster's particular skill has been to explore the development of technology while simultaneously applying this research to his current building projects. It is important to remember that Norman Foster and the late Dr Buckminster Fuller collaborated on futuristic projects that could yet influence our environment. The "Climatroffice" is such an idea—the enclosure of the maximum *amount of office space under* the minimum envelope. Internal planting allows for the creation of a micro-climate. This is exactly the kind of project the Docklands Development Corporation should be examining if they continue with plans to build large office centres on the Isle of Dogs.

Buckminster Fuller and Foster have also completed research on the "Autonomous House." This is a double skin dome with warm or cool air circulating between the two skins. The domes are half-glazed and half-solid and rotating independently can follow the path of the sun in the day and be closed up at night. While neither the "Autonomouse House" nor the "Climatroffice" have yet been built the ideas fuel the current work of the practice.

It is in this ability to look at developing technology in all fields (Foster is fascinated by *aircraft desgn, for example)* and transfer it to current building problems that would have made Foster ideal for the BBC. During his briefings with some of the BBC staff they became used to hearing him say, in answer to any problem, almost monotonously . . . "but there is the technology. . . ." I hope the BBC will not now turn to some cheapjack commercial architect to run up insignificant new premises for them at the While City. As the leading broadcasting service in Europe in terms of quality of their product, the BBC directors have a perfect opportunity to continue their search for quality into the trchitecture and design of the new White City.

The six schemes on show in the Sainsbury Centre are all clearly displayed, particularly the *panels dedicated to the* Sainsbury Centre itself.

Of the six projects on show — Hong Kong Bank, Sainsbury Centre, Renault / Swindon, Gallery and Mediatheque at Nimes, Willis Faber Dumas, and the Leichtathletikhalle to be built in Frankfurt—*it is* perhaps Nimes that points the way to the future. The site there is spectacular, next door to the best preserved Roman temple in Europe, the Maison Carré. The brief calls for a sort of Pompidou Centre with library, gallery and plenty of exhibition space. Foster's plans show how he has developed a scheme that implies a portico, and takes visitors on a route up a grand staircase. There are what he calls "imprints" from the past but no hint of pastiche or misunderstood classicism.

The images that excite Norman Foster are helicopters, jets, space technology, Japanese traditional screen houses, galleria (like Milan), triumphs of engineering—great bridges, towers and spans — and the pleasure of a well-detailed steel junction. He has, to date, remained a designer who expresses everything through space, structure and function. For him the jet fighter expresses enough by its aerodynamic form — the very form that enables it to function. His framework of cultural reference is limited—quite deliberately—and it is this that produces such a cold degree of sheer refinement.

At the BBC I felt that Foster was on the point of an interesting change. He has mastered the technology and is ahead of any of its developments—he understood the metropolitan and town planning issues of the difficult Langham site—and he was beginning to humanise and allow a little more intimacy into his designs. *Perhaps it was the* nature of radio—essentially a small scale and private (although simultaneously very public) activity that inspired him.

Architecture needs to grow in the direction of an understanding and sympathy at a very human level, while maintaining the lasting elements of the past. The present polarity of the architectural debate is in danger of destroying the common ground—what we all want from our architects is a greater richness and diversity as well as buildings that work perfectly. Foster Associates are well placed to grow, to enlarge their imagery without compromising their technological competence. Their greatest triumphs still lie in the future.

Beauty and the Beast/St. John's, Smith Square

Max Loppert

Adam Pollock's's *Musica nel chiostro*, Festival, based on the Italian town of Batignano, has made a habit of sending various of its wares for London sampling. The latest, given three performances at St John's, Smith Square this weekend, was not one of the 17th or 18th century operas on which the festival has in the past concentrated, but a new work—*Beauty and the Beast*, an opera in two acts by Stephen Oliver, a regular Batignano hand.

Oliver took as his subject the version of the legend by Mme le Prince de Beaumont; for the 1984 Batignano première he sèt the Italian translation by Carlo Collodi, for London his own Englishing of Collodi. Instead of reworking the tale into a form of dialogue libretto, he has retained in full the original text, which the cast of six deliver both in and out of their own given characters, and which develops passages of direct speech where the original permits.

The aim was clearly the creation of a modern *farola in musica*, of which Monteverdi's *Combattimento di Tancredi e Clorinda* can be recognised as ancestor and direct model. A *once-upon-a-time world* is immediately conjured up, yet the ground plan of the setting allows the narrative to flower at key junctures into little "numbers," ensembles, moments of *musico-dramatic reflection.*

Oliver has glanced back to Britten's Church Parables, to masque and madrigal forms, even (perhaps) to the medieval Passion play, and fashioned his various practical requirements, dramatic compulsions, and musical influences into an impressively fluent music-theatre structure—he is, after all, one of the most prolific opera composers now living, and the sheer competence of *Beauty and the Beast* should come as no surprise. The orchestra of eight (including two percussionists) limns *motifs* and timbres asssociated with various characters: the idiom of the score moving between non-tonality and semi-diatonicism, is unified with the same expertise shown elsewhere.

It's an immensely skilled *product, indeed*, but *one that* leaves little in the way of personal fingerprint: Oliver, the Richard Rodney Bennett *de nos jours* (as it were), writes music that is heard, admired, and quickly forgotten. In the Batignano cloister the show was lent (*according to report*) an extra ounce of magic by the siting of its scenes in diverse locations, to which the audience migrated (the "stereophonic" planting of instrumentalists was an essential part of the atmosphere). For St John's the highly mobile production by Graham Vick, in Russell Craig's spare designs, had to be penned into a single space: and though this was achieved with some artistry, the result seemed much less germane to the material than it must have at Batignano in the warm Tuscan night air.

And frankly, after having previously sat through *Euridice* and *La Dori* given by the same forces in similar style, I'm getting a little bit tired of performances which for reasons of *arty theatrical device* remain either invisible or verbally incomprehensible to half its audience at any particular moment. The saving grace of Friday's showing was an excellent account of the music under Graeme Jenkins, and a quite *exceptionally gifted and attractive* young cast, who must all be named equally: Anne Mason and Robert Dean *in the title* roles, Henry Herford (Merchant), Linda MacLeod (Fairy), and Louisa Kennedy and Christine Botes having a whale of a time as *the Cenerentola*-style wicked sisters.

Fernando Bujones/Covent Garden

Clement Crisp

In a week that began with the fatuous *Eurovision Young Dancer of the Year* contest, continued with the dire Dublin City Ballet, and culminated in a longest day of sodden glumness, *it is good to record that light*, truth, warmth were at last in evidence when Fernando Bujones stepped on to Covent Garden's stage. Dame Marie Rambert coined the phrase *bella danza*, on the analogy of *bel canto*, to describe the kind of beautifully rounded, full-toned classic dancing that Mr Bujones showed us on Friday night in his Royal Ballet début as Solor in the Shades scene from *La Bayadère.*

What we see with Mr Bujones is a central image of the classic academic style. To an ideal physique — perfect legs and feet; grand placing of head and torso — has been given the purification and distinction of training at the School of American Ballet. There results a harmony in execution which informs every movement, from astounding bravura steps to the simplest gesture. The silhouette is pure, noble in repose, and with what sincerity are the "Indianisms" of the role shown to us.

And then he dances, beating cabrioles of such leisurely clarity that time seems slowed down; throwing off *coupés jetés en tournant*, entrechats, double *assemblés*, embellishing aerial steps, with a smooth flow of *dynamics, a control of effects* that speak of technique of surpassing excellence and polish.

There was, of course, an element of showing off in certain of Mr Bujones' interpolations, rather in the way Rakhmaninov *would* make glittering pianistic decoration to some simple piece, but this is part of the history of the role itself, and properly part of the excitement engendered by dancing so blissfully easy, clear, so that we rejoice in such *mastery.*

There were two drawbacks to a performance which was, otherwise, enhanced by Mr Bujones' understanding of Solor's character, since he has danced in Makarova's full-length staging for American Ballet Theatre (whence he brought his own costume). One was an ill-matched partnership with his Nikiya, Bryony Brind, who is too tall for him, and could nowhere share his authority. The other was the continuing uncertainties of Isaiah Jackson's view of Minkus' score, which was made to sound raucous and erratic in rhythm.

The cascade of shades was a procession of sometimes mixed blessings, not as physically *uniform* as they have been in the past. (I recall that it was 10 years ago that the *Evening Standard* award for the year's outstanding achievement in ballet was given to the corps de ballet for their appearance in just this work.)

The evening also brought a new cast to David Bintley's *Consort Lessons.* The male quartet does not yet have the buoyant assurance of their predecessors, but this can come with experience in their roles. Chief pleasures were the alert sparkle of Nicola Roberts in the first movement, and Fiona Chadwick's authority as the ballerina of the piece. In her every interpretation I sense the intelligence of Miss Chadwick's dancing, in the way she shapes the development of choreography, in the assurance of her manner, with no uncertainties to a handsome technique. To see her simply stepping into an arabesque, or cleaving through a phrase of movement, is to watch an artist gifted, lovely, youthfully radiant in the bright morning of her career.

Nelly Miricioiu/Wigmore Hall

Andrew Clements

Miss Miricioiu's enormous talents have been hailed more than once on this page. But though her career in the opera house goes from triumph to triumph, she is only just beginning to enter the world of recitals. She gave her very first at the Goldsmiths' Hall in March, when Max Loppert described her recital giving as "an art in its infancy," and the same partially formed impression was left by her appearance at the Wigmore Hall on Thursday when, accompanied by David Harper, she delivered a widely varied programme.

That very variety made her present shortcomings all the more obvious. For as the music tended more and more towards operatic treatment, so her performances became correspondingly more coherent and alive. The second half of Granados, Respighi and the Proch Variations (evidently her party piece) was progressively more vivid, while an encore from Puccini's *La Rondine* was quite superb, with the voice and dramatic intensity at last fully engaged.

At the opposite pole were Miss Miricioiu's Duparc and Ravel, lacking in poise and shape and scattered with vowel sounds of most dubious provenance. The Rakhmaninov *Vocalise* showed the beauty of *her voice as an instrument*, though even there the phrasing and occasionally the intonation faltered. Some darkly coloured phrases in Ravel's *Cinq Melodies populaires grecques* hinted at a degree of vocal characterisation that could soon be used with more *confidence*; at the moment however, she evidently only feels able to attack Italian *repertory* with such a degree of stylishness.

L'Itinéraire/Almeida

Andrew Clements

The Almeida Festival has moved on from American experimentalists to living French composers; "Aspects of French Contemporary Music" is another of the strands woven into *this fascinating, multi-hued programme.* The ensemble L'Itinéraire visited the Huddersfield Festival two years ago, but amazingly, for it is one of the foremost French new-music groups, had not appeared in London before its concerts at the Almeida Theatre on Friday and Saturday.

Friday's programme proved not to be an especially satisfying one. It lacked coherence and direction; the inclusion of Debussy's *Syrinx* and Varèse's *Density 21.5, indifferently* played replacements for Boulez's flute *Sonatine*, emphasised the bittiness. Pascal Dusapin's *Pièce* for solo cello proved to be a maudlin essay in quarter-tones and fractured lyricism, which signalled its own demise several minutes before it arrived.

It was left to Michaël Levinas, one of the founder-composers of L'Itinéraire, to inject more pungency with a forceful account of Boulez's First Piano Sonata and a highly charged version of the second book of *Structures* with Jean-François Heissier, which made visual sense of some of Boulez's map of alternatives and internal cues. Levinas also gave the British première of *Shiraz* by Claude Vivier, thereby introducing into the Festival the composer whose music will dominate its final fortnight.

Vivier was a French-Canadian, bor nin Montreal in 1948, a pupil of Gilles Tremblay and Stockhausen, who died violently in Paris two years ago. The Almeida is presenting a very thorough survey of his work, culminating in a staging of his opera *Kopernikus* on July 5 and 6. *Shiraz* did not quite *prove to be the appetiser* one hoped for, impressing more by its confident dramatic shape than the freshness of its language.

The style is closest to Messiaen, whose *Vingt Regards seems to be the* model behind the dense chordal toccatas that frame the work and whose modes of limited transposition surely generate the delicate rootless counterpoint that forms its point of repose. The piece undoubtedly *confirms Vivier's ability to project his* music with considerable force; whether it will survive comprehensive exposure over the next two weeks remains to be heard.

Dublin City Ballet/The Place

Clement Crisp

It was perhaps characteristically Irish that the Dublin City Ballet, making its British début at The Place on Thursday night, should present "An evening of works by Anna Sokolow," a doyenne of American Modern Dance and include in it another modern dance piece by a member of the company. It was, all in all, a rather unsettling occasion. Miss Sokolow's work is often dark in mood, and her *1981 Dreams* is a sequence of brief images of suffering inspired by Nazi concentration camps. It calls for rather more powerful projection of its anguish than the Dublin dancers provide if its expressionistic manner is to make proper effect. Performed here with obvious good intentions, it looked grim, but uncommunicative.

It was preceded by a *Homage to John Field* so slight as to be almost invisible, as two couples moped to the delicate traceries of music by the Irish Chopin. The evening was, indeed, markedly short on choreographic invention, though long on emotion. The *Songs from the North*, by Anne Courtney, a leading dancer with the troupe, treated of violence, grief and what the programme opined was peace, in the con*text of a man shot* in Ulster and mourned over by a woman. Its intensity of feeling spoke of national distress; its dance manner—yet more distraught falls and gesticulation—had immediacy, but limited dynamic range, though the performances by *Miss Courtney* and *Tim* Clarke argued its theme with commendable directness.

Miss Sokolow's *Magritte*, was yet another exercise in homage, yet another muddled bouquet of tired blossoms. Pictorial surrealism does not transfer well to the stage, and what we saw was a lengthy and leaden caprice based upon ideas and symbols prised from the Belgian artist's paintings. The dance was narrow in range, the performances—notably in a desperate comic interlude about an assassinated blonde, her lover and two *flics* in which there was chat where there should have been steps—conveyed little theatrical impact.. It was, I am sure, done with the best possible will, but Magritte and the dancers deserve better, so, incidentally, does Erik Satie, whose *Gymnopedies* are attributed to another composer. They order these things, and ballet, differently in Dublin.

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Arts Guide

Music/Monday. Opera and Ballet/Tuesday. Theatre/Wednesday. Exhibitions/Thursday. A selective guide to all the Arts appears each Friday.

June 21–27

Music

LONDON

Ravi Shankar and friends. Royal Festival Hall (Mon). (9283191).

Academy of London conducted by Richard Stamp with soloists including Tatiana Troyanos and Arleen Auger. Handel's Giulio Cesare in a concert performance. Barbican Hall (Mon). (6388891).

Royal Philharmonic Orchestra conducted by Andre Previn with Yo Yo Ma, cello. Elgar. Royal Festival Hall (Tue).

London Symphony Orchestra conducted by Jane Glover with Sarah Walker, mezzo-soprano and Michael Aspel, presenter. Gala concert in the presence of the Duchess of Gloucester. Bliss, Wagner, Mahler, Tchaikovsky and Poulenc. Barbican Hall (Tue).

Oscar Peterson: Royal Festival Hall (Wed).

London Symphony Orchestra conducted by Rafael Frühbeck de Burgos with Pierre Amoyal, violin. Beethoven and Dvorak. Barbican Hall (Thur).

Royal Philharmonic Orchestra conducted by Andre Previn with Dame Janet Baker, mezzo-soprano, and Thomas Allen, baritone. Mahler and Strauss. Royal Festival Hall (Thur).

Ronnie Scott's, Frith Street: Joe Pass, guitar. (4390747).

PARIS

Nouvel Orchestre Philharmonique conducted by Marek Janowski, Leonie Rysanek, soprano: R. Strauss (Mon, Tue). TMP-Chatelet (5241516).

Ensemble Orchestral de Paris conducted by Jean-Pierre Wallez, Mstislav Rostropovitch, cello, Galina Vishnevskaya, soprano: Haydn, Landowski (Tue). Salle Pleyel (5610630).

Paul Kuentz choir: Haydn's The Seasons (Tue). Saint-Severin Church (6338761).

Krystian Zimerman, piano, Kyung-Wha Chung, violin: 6.30 pm (Tue, Wed, Thur) Théâtre de la Ville (2742277).

Arts Florissants conducted by William Christie: Händel, Scarlatti (Wed). Opéra Comique (2960611).

Vladimir Ashkenazy, piano: Schubert (Wed). Théâtre des Champs Elysées (7234777).

Orchestre de Paris conducted by Myung Whun Chung, Bruno Leonardo Gelber, piano: Tchaikovsky (Wed). TMP-Chatelet (2330000).

NETHERLANDS

Amsterdam, Concertgebouw. The VU Orchestra conducted by Daan Admiraal, with Peter Brunt, violin. Berlioz, Sibelius, Bartok (Thur). Recital Hall: lunchtime concert by Ioe van den Dool, flute, and Diny van Overveld, piano (Wed). (718345).

The Hague, Diligentia. The 2nd Dutch Music Festival, featuring Dutch composers (Wed). (464308).

Den Bosch, Casino. Scottish National Youth Orchestra (Wed). (125125).

Amsterdam, Tropeninstituut (Mauritskade 63). Traditional music from Beijing (Mon, Wed). (923189).

NEW YORK

Kool Jazz Festival (Avery Fisher Hall). The week of jazz greats jamming the city awake for summer. (8742424)

WASHINGTON

Mostly Mozart (Concert Hall): Conductor, Gerard Schwarz; violinist, Joshua Bell; piano, Horacio Gutierrez. All-Mozart programme (Tue): conductor, Raymond Leppard; cellist, Janos Starker; pianist, Ken Noda: Boccherini, Mozart, Haydn (Wed): Emerson String Quartet: Haydn, Mozart, Schubert (Thur). (2543776)

Saleroom/Antony Thorncroft

Cezanne and much more

With the London season in full swing, and the tourists cramming in for Wimbledon and Ascot, the salerooms are doing their best to tempt their purses. Among the riches on offer this week are a Cezanne portrait at Sotheby's, which carries an estimate of up to £1.5m, and a wood sculpture, intended as a bowl, which Christie's considers one of the finest items of tribal art to appear on the market in years. It expects bids up to £200,000 this morning.

Both the auction houses are holding their annual summer sales of Impressionists, and Sotheby's has much the better show. The Cezanne portrait is of his future wife Hortense Fiquet, painted just before they married in 1886.

Another Cezanne, this time a still life of apples, is in the same sale on Tuesday night. Still lifes by Cezanne rarely come up at auction and since this one has remained in the same family for 50 years, and thus has the essential "freshness", Sotheby's are confident of yet more bids around the £1.5m mark.

What makes Christie's African work of art unusual is that it is confident about the identity of the carver. The 25-inch high sculpture is attributed to Olowe, who is regarded as the best wood carver of the Yoruba tribe. He was born in what is now Nigeria near the end of the 19th century and produced the bowl *from a single piece of wood* around 1920. It is decorated with many figures and has been much exhibited. It is sold from the estate of the American artist William More and part of the proceeds will go to a Californian monastery.

Two more particularly interesting items on offer at Christie's are a fine impression of what is thought to be the only print executed by Pieter Bruehel the Elder, and a set of six George II side chairs that were originally in Ditchley Park.

The print depicts a landscape with rabbit hunters. It comes from a private collection up for sale and should make £25,000 on Wednesday. The chairs later ended up at Mereworth Castle, and were sold from there in 1968, through Christie's, for £2,200. Now a top estimate of £70,000 is placed on them at Thursday's sale.

On Tuesday Sotheby's is offering what it claims is probably the earliest known piece of English writing of any *kind*. It is, of course, in Latin and was written by an Irish monk. But his monastery could have been in Northumbria, and there is no denying that this recently unearthed fragment dates from the early 7th century. Sotheby's has now raised its estimate on this rare scrap of vellum to £80,000-£120,000.

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Monday June 24 1985

Testing time for Lloyd's

THIS IS a critical week for the Lloyd's insurance market and for all those who plead the cause of self-regulation as the best method to regulate Britain's financial community. Lloyd's is due on Wednesday to make a policy statement on the most serious of its recent troubles — the PCW affairs, one of the worst financial scandals to surface in the City of London.

So far Lloyd's has not acquitted itself well in the way that it has dealt with the case. There has been a lack of leadership over the problem, and what looks like an almost callous indifference to the plight of 1,525 underwriting members, who represent a significant part of the market's capital base and whose affairs at Lloyd's have been exposed to the most flagrant abuse.

In the first place about £40m of funds belonging to the underwriting members is alleged to have been misappropriated by two former executives of the PCW agency, which was acquired in 1973 by Minet Holdings, a publicly quoted insurance broker, whose main broking subsidiary is approved by Lloyd's.

Second, the underwriting members are facing mountainous trading losses, as a result of what has all the appearance of reckless underwriting. More than £60m is required from the underwriting members' personal resources to fund the losses. Other troubles have surfaced which suggest that their losses may be due in part to past mismanagement of their affairs. For a few members the final blow is that stop-loss policies which were intended to limit their underwriting losses have turned out to be more or less worthless.

When Minet recovered large sums of the underwriting members' missing money last year, it made the members an offer in which it required them to assign away their legal rights to sue anyone in connection with the affair. Lloyd's itself gave no guidance on an arrangement which is now claimed by accountants on behalf of the afflicted underwriting members to be unsound in the light of the substantial losses which have since materialised.

Moreover, Lloyd's has appeared to ignore the fact that in sorting out the underwriting members' affairs, Minet has been trying to reconcile the very different interests of underwriting members and shareholders. Despite this apparent conflict of interest it is only in the past few weeks that Lloyd's has chosen to put the management of the underwriting members' affairs into independent hands.

In the face of this mess, Lloyd's has stuck to the underlying principle that members are individually liable to the full extent of their personal wealth for trading losses—even though financial irregularities may have damaged the members' investment in the market. Although Lloyd's accepts a responsibility for managing an orderly market, it argues that all the irregularities took place before the regulation of Lloyd's was reformed by a new Act of Parliament which came into force at the beginning of 1983.

Inaction

Yet that is not a sufficient reason for inaction, for there can be little doubt that Parliament would not have granted Lloyd's its unique powers of self-regulation if it had known the full extent of the market's past shortcomings. Those powers must be used to limit the damage done to those who are threatened with such large losses through their involvement in the marketplace.

When Lloyd's reformed its self-regulatory structure it sought a powerful immunity from Parliament designed to protect it against suits for damages from its membership. This was designed to allow Lloyd's to take swift and effective action when trouble arose in the market without fear that its freedom of movement would be threatened by costly litigation.

Armed with this unique legal protection Lloyd's should take direct executive control of the events at Minet's troubled agency. Since there are numerous precedents in existence at Lloyd's for providing financial assistance to members who have been hit by irregularities, it must provide real help for the members.

As a first step, it needs to do whatever is necessary to ensure that the stop-loss policies are honoured. Together with Minet, it has to find ways of helping members cope with that part of the losses which was not caused by orthodox underwriting.

If this affair is a test case for self-regulation, it is also an important measure of the Government's resolve in matters to do with the City of London. One of the most offensive features of the PCW affair is the apparent inaction of the office of the Director of Public Prosecutions.

Danger signs in farm trade

ONCE AGAIN, the war drums are beating in Washington and Brussels over agricultural trade. Disputes over export subsidies and tariff protection have — in terms of rhetoric at least — brought relations between the U.S. and the EEC on farm issues to their lowest point for some time.

Claiming that the Community has used unfair subsidies to rob it of agricultural markets over the last few years, the U.S. has set up a $2bn programme of its own — targetted against the EEC — to try to win back customers in the next three years. A transatlantic row about trade in citrus products threatens to trigger off a damaging chain reaction of retaliatory measures.

Tension between the two sides over agricultural trade is nothing new. The U.S. has long complained about the progressive loss of the EEC market as the Europeans have become more self-sufficient in food. But it has come grudgingly to accept the position, and the conflict has by and large been restricted to localised, and carefully stage-managed, skirmishing in third markets.

Sabre-rattling

There is no denying, though, that the temperature has risen this year. The main reason is pressure for action from Congress, reflecting the dire financial straits of many U.S. farmers and frustration at the EEC's failure to agree on a date for a new round of multilateral trade talks:

In a sense, the latest American sabre-rattling is founded on an irrelevance. The U.S. has indeed lost markets in the last few years, but not just to Europe: Canada, Argentina and Australia have also made sales at its expense.

Besides, two of the main reasons for the drop in U.S. agricultural exports can be laid squarely at the door of policymakers in Washington. These are the strength of the dollar, and the ill-fated American embargo on grain sales to Moscow in the wake of the Soviet invasion of Afghanistan. Most important of all, a limited battle over specific markets between two large exporters will do nothing to tackle the real disease underlying most farm trade problems, which is a basic surplus of subsidised production capacity.

What ever the U.S. grievances against the EEC—and it has many justified complaints — redress does not lie in a spate of ill-considered export agression.

For one thing, there is a real danger that an agricultural trade war could spill over into other areas.

For another, the idea that market forces should be allowed to play a greater role in agricultural trade is, in any case, gradually gaining ground in many national capitals.

In Washington, the central tenet of the Reagan Administration's 1985 farm bill—that price support levels should be lowered to allow farmers to compete more effectively—has taken a surprising hold among Congressmen. In Brussels, the European Commission—backed by Britain and France—is well aware of the need to reduce EEC cereals prices towards world levels.

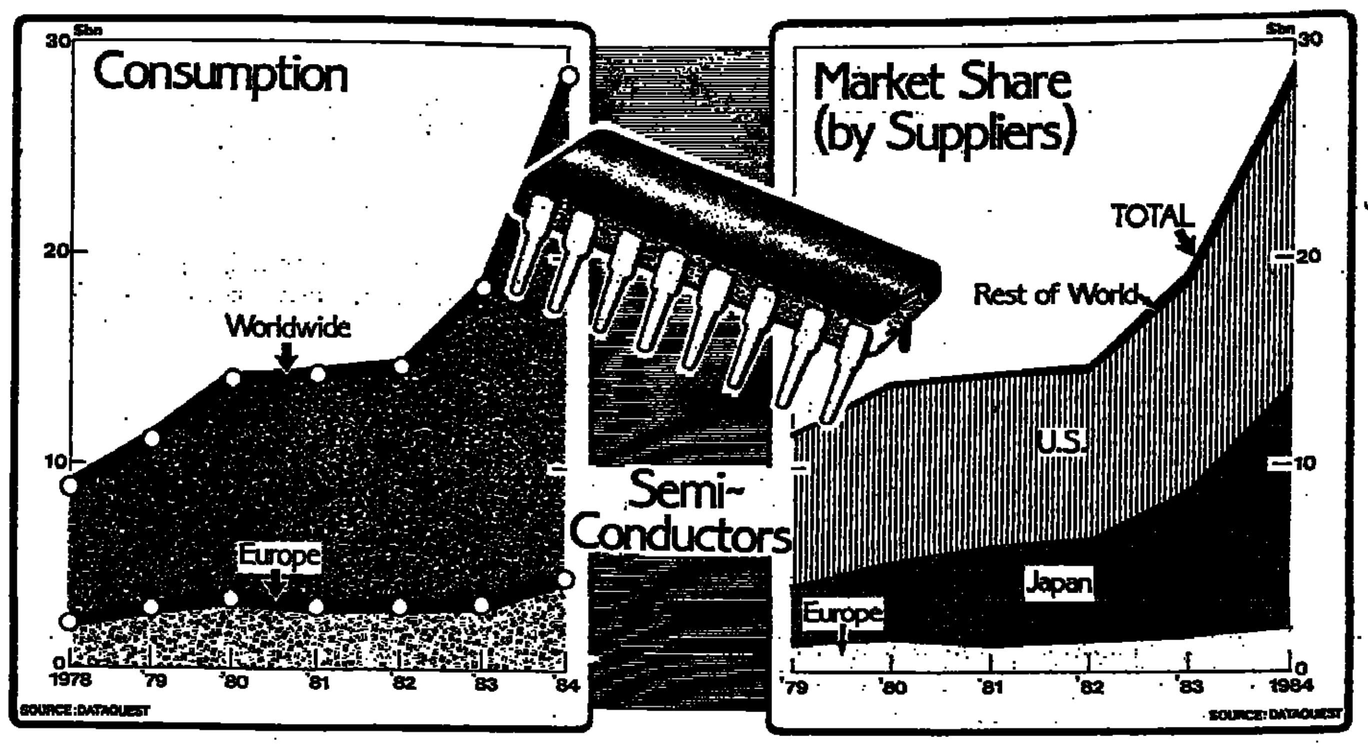
The important thing for the U.S. and the EEC ought to be to capitalise on these developments by moving in an orderly fashion towards talks aimed at reducing agricultural protectionism in the next round of Gatt negotiations.

For Brussels that means agreeing as a matter of urgency to a date and a relevant agenda for the talks, and sticking to policies aimed at bringing EEC prices in line with world levels.

For Washington, it means doing the utmost to contain political pressure for more aggressive action. The panoply of EEC farm subsidies is as old as the Community itself, although its effects have arguably become more damaging to other exporters in recent years. They will not be changed overnight.

With the mountains of surplus produce growing and markets stagnating, the alternatives to a steady, negotiated reduction of farm protection are grim.

EUROPEAN SEMI-CONDUCTOR INDUSTRY



Graham Lever

The harsh imperatives of survival

By Guy de Jonquieres

WHO IN their senses would choose to compete in an industry in which a new plant costs almost as much as a small steel mill, yet is likely to be obsolete in five years, and where product prices are about as unpredictable as cocoa bean futures?

To European electronics manufacturers contemplating the Alice-in-Wonderland economics of volume microchip manufacturing, the answer has long seemed self-evident. Most have been content to dabble timidly on the sidelines while U.S. and Japanese producers grabbed more than 90 per cent of the world semiconductor market, which grew to almost $29bn last year.

But the harsh imperatives of survival on international markets riven by relentless technological change are forcing European companies to re-do their sums. Many have now concluded that they have no option but to play for double or quits: that high as the risks are, their only hope of remaining competitive is to make much larger technical and financial commitments to chip-making than ever before.

The most eye-catching symbol of Europe's new-found ambitions is Megaproject, a three-year joint effort by West Germany's Siemens and Philips of the Netherlands to develop advanced semiconductor technology. They are gambling that, by leapfrogging into the next generation of microchip memories, they can close the two- or three-year lead which Japan has acquired in mass-production techniques. Megaproject's budget is $500m, and each company expects to spend as much again on new production facilities.

Other companies are also running hard to catch up. Thomson of France and SGS-Ates of Italy are spending the equivalent of more than half their annual sales on research and development and capital equipment. Britain's Standard Telephones and Cables has launched a £60m expansion programmes. GEC and Plessey have also stepped up their investments, though mostly for more specialised components, many of which they use themselves.

The results have begun to show through in higher sales. Last year, the semiconductor businesses of SGS-Ates, Thomson and Matra-Harris of France and Britain's Inmos all outstripped the record 50 per cent growth in the world market. Inmos and SGS-Ates also moved into profit—though the outlook for this year is much less promising.

"I believe there is much evidence to support a European renaissance," says Mr Malcolm Penn of Dataquest, a U.S. company which specialises in analysing the semiconductor industry. A harsh critic of Europe's feeble performance in the past, he thinks it now has a "huge opportunity" to make an impact on world markets.

Some previously troubled European companies have been revitalised by the appointment of experienced and enterprising top managers. The recent recovery of Thomson Semiconducteurs and SGS-Ates owes much to the impact, respectively, of Mr Jacques Noels, formerly of Texas Instruments, and Mr Pasquale Pistorio, who was lured from Motorola, another U.S. industry leader.

Both men are notoriously hard taskmasters who have not flinched from applying painful medicine. Last year, SGS-Ates ran a recruiting campaign featuring advertisements in which Mr Pistorio offered prospective employees "blood sweat and tears." Several thousand eager applicants replied.

But European-owned manufacturers still face a long and gruelling struggle to reverse the steady decline in their share of the world market. Last year they accounted for a paltry 8.5 per cent by value, less than two-thirds the 1979 level, and only 3 per cent of markets outside Europe. Much of their output is still in older products and their share of microchips, the fastest-growing product sector, last year was a mere 6.7 per cent, according to Dataquest.

Only one European company, Philips, ranks among the world's top 10 suppliers (it is No 8). Moreover, it owes its place to its U.S. subsidiary Signetics, acquired in 1975, which contributed two-thirds of Philips' worldwide semi-conductor sales last year.

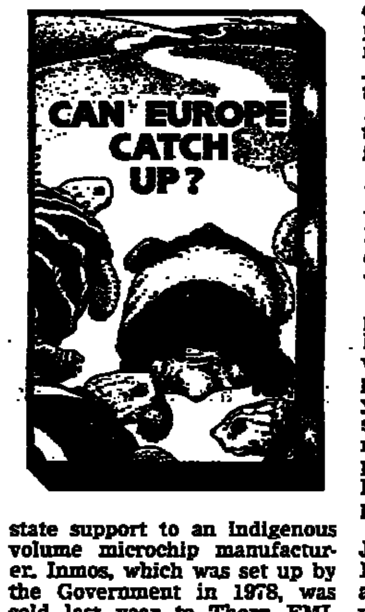
European efforts to join the big league now face their first major test. Since last autumn, a slowdown in the U.S. computer industry and a massive worldwide surge in semi-conductor production capacity has sent the chip market reeling, and few companies expect a recovery until well into next year.

Prices of some widely-used "commodity" chips such as 64K D-Rams have plummetted by as much as 80 per cent in the past year. "The market is terrible, atrocious. It is the worst crisis I can remember in 22 years in the business," says Mr Pistorio of SGS-Ates.

Profits in much of the industry have evaporated. In the U.S., many planned investments have been shelved and there have been renewed calls for trade protection against Japanese manufacturers. The latter, which have long pursued a policy of expanding in recession, are pushing ahead relentlessly with plans to double output of the new generation of 256K D-Rams, further depressing prices. South Korea is also making a big push into the memory chip market.

The Europeans can draw some comfort from the fact that their home markets are slightly less volatile than the U.S. Many also are cushioned by subsidies. Thomson and SGS-Ates are both state-owned and get sizeable public investment assistance, while the Dutch and German governments are contributing about $100m to the cost of Megaproject.

Britain is the only large EEC country not providing direct state support to an indigenous volume microchip manufacturer. Inmos, which was set up by the Government in 1978, was sold last year to Thorn EMI, which is currently feeling the impact of falling profits in consumer electronics, its main business.



European companies seem likely to have to face a lot more trials even after the market recovers from its current troubles. "They must all be prepared for five years of severe bleeding," said Mr Penn.

So why bother? The answer lies in Europe's belated recognition of the breathtaking speed and scale of the revolution which silicon technology is producing in the electronics industry. Advances in miniaturisation since IBM's personal computer was launched in 1981 mean that it could be redesigned today using only 18 chips instead of 250. By 1988, it is estimated that the number could be reduced to three.

The competitive advantage of many products, from machine tools to microcomputers, is increasingly determined by the power and functional characteristics of the chips they contain. As product life cycles continue to shorten, early access to the most advanced micrelectronic technology is becoming a key factor in commercial success.

Some European companies believe they can only secure the technology through a bolder commitment to memory chips, where the need for high volume and low costs forces manufacturers to push their production techniques to the limit. That is also the most volatile and fiercely competitive part of the chip business. "But you have to be able to make such products if you want to make more sophisticated components," says Dr Hermann Franz, head of Siemens' components division.

Compared with their U.S. and Japanese competitors, however, European manufacturers face at least two handicaps: high production costs and sluggish home markets. "Everything in Europe is so much slower and more difficult, I am forced to make more overseas," says Mr Pistorio. SGS-Ates has just completed a $50m Singapore plant equipped to run 24 hours a day, seven days a week.

Semiconductor sales in Europe last year totalled $4.8bn, well under half the U.S. level and only 18 per cent of the world market—down from 30 per cent in the early 1970s. That amounted to a mere $14 per head of population, against $55 for the U.S. and $67 for Japan.

The lag is due partly to Europe's shortage of large-volume chip applications. Computer manufacturing accounts for barely a fifth of its total chip consumption, against almost half in the U.S., and consumer electronics is in difficulties. Europe's telecommunications industry is technically strong but sells mostly to slow-moving national monopolies which rarely subject their suppliers to the bracing commercial disciplines imposed by private sector customers.

Dr Iann Barron, chief executive of Inmos which specialises in very-high-speed memories, says many UK customers complain that its products are too advanced for their needs. "Inmos is an irrelevance to European industry at this stage," he says. "Europe simply doesn't provide the 'market pull' needed to create world product standards," adds Dr Theo Holtwijk, manager of Philips' semiconductor planning.

Some believe that the growing market for "custom" and "semi-custom" chips, made in relatively low volumes and tailored to specific applications, offers a big opportunity for Europe. Computerised techniques are revolutionising this business, cutting design times from months to weeks and sharply lowering costs.

Until recently, Ferranti was the world leader in semi-custom components. But others are catching up fast, and its sales last year were overtaken by Japan's Fujitsu and LSI Logic, a U.S. company formed in 1980. Some critics accuse Ferranti of not pressing its advantage hard enough: the company says it must put margins ahead of market share.

Europe's stodgy markets are causing many manufacturers to seek most of their growth overseas, principally in the U.S. Inmos, which has a plant in Colorado, sold 80 per cent of its output in the U.S. last year. SGS-Ates is building a $100m factory in Phoenix, Arizona, and Siemens and Thomson are talking of spending at least as much to establish U.S. production bases.

What are Europe's chances of success? In strictly scientific and technical terms, it is almost certainly up to the task. Its universities and industries do not lack skilled brainpower, and some of the laboratory research being undertaken by companies such as Philips and Siemens is judged to be equal to the best in the U.S. and Japan.

But the real challenges are more likely to lie in organisation, management and marketing. Sheltered by conservative home markets, most European electronics companies have not had to develop the hair-trigger reflexes demanded by the semiconductor business. Few apart from Philips have much experience of running complex, geographically dispersed manufacturing and marketing operations.

Philips and Siemens are both probably big enough to justify large investments in semiconductor production on the basis of their own needs and to finance them out of their own resources. Other companies are not so fortunate. Mr Noels of Thomson argues that government support will always be necessary in Europe because private investors are reluctant to provide financing.

"This business requires $1bn of investment every four to five years. You can't do that alone," he says. "But nobody in Europe is prepared to believe that you can make profits out of semiconductors."

The outlook is further complicated by signs that the world semiconductor industry is in the throes of a confusing structural upheaval. The difficulty of financing huge fixed investments when profits vary wildly from year to year has driven many older U.S. semiconductor manufacturers into the arms of larger industrial companies. But such marriages have proven no guarantee against losses and can create their own management problems.

Japanese competition has already squeezed many U.S. supliers out of "commodity" components such as D-Rams. Whether American companies can hope to stage a comeback or should focus on other products such as specialised "custom" chips, is a subject of heated debate as California's Silicon Valley tries to identify future market trends from a jumble of conflicting signals.

Small wonder that in spite of its new-found momentum, much of Europe's industry is cautious about setting grand goals. "It is not a minor factor that Europe exists at all in semiconductors," says Mr Noels. "If by the late 1980s two of the top 10 companies are European, we can say we have succeeded. That is a much more valid criterion than the semiconductor industry's balance of trade, how many jobs it creates or how many chips Europe uses."

This is the fourth article in the series. Previous articles appeared on June 17, 19 and 21. The next will be published on Wednesday.

Men and Matters

Doubles-the money

He is an unlikely looking athlete—a balding, 30-year-old with a drooping moustache and a thickening midriff on his 190 lb frame that suggests a taste for Foster's lager.

Australia's Mark Edmondson accepts the banter provoked by his appearance. He can afford to. As one of the tennis kingdom's 39 male millionaires (from prize money alone), he can take his cheerful wife, Vicki, and their small son, Mark Karl (originally they were going to call him Karl Mark but for obvious reasons reversed the names), with him on his travels around the world.

The Australian Open champion of 1976, "Eddo" has always excelled in doubles. His latest success, with Kim Warwick, at the French Open earlier this month earned him another $29,250—a seemingly respectable sum until you discover that Sweden's Mats Wilander earned $146,000 for winning the singles in Paris.

The disparity in rewards for singles and doubles is something about which the doubles stars are continually complaining. At Wimbledon this year the total prize pool is £1.94m, of which the men's singles champion will take £130,000 and the women's champion £117,000. The respective doubles prizes are £23,750 and £20,550 per player.

Doubtless John McEnroe and Martina Navratilova will carry off the lions' share of this year's rewards to increase the earnings that have already catapulted them into the super league of show-biz stars.

McEnroe's total prize money so far is $8.1m; while Martina's $9.4m makes her the world's richest sportswoman.

Not that "Eddo" is envious. When he celebrates his 31st birthday on Friday, his prize money from a decade of globe-trotting will be nearing $1.35m —not bad at all for a former maintenance man from Gosford, New South Wales, whose father was such a tireless worker for tennis in the community that a local tennis complex has been named after the family.

"The problem here is stopping the bad behaviour spreading to the spectators"

Oil field

The British Red Cross — a volunteer force of 100,000 funded by public donations of £15m a year — has again turned to the oil industry to recruit a new director-general.

After nearly 30 years service with Shell, John Burke-Gaffney takes up the post in September. He succeeds Donald Piggott, a former BP executive.

Born in Africa, Burke-Gaffney was Shell's chief executive in Zambia before returning to Britain a few years back to take charge of the production of Shell's "global issues" films.

He has been concerned with such films as "For Want of Water," showing how poor, rural communities in Zimbabwe, Malawi and Nepal, cope with an inadequate water supply; and "Escape from Hunger" a study of the fight against famine in the Third World.

His Red Cross post will renew a family medical tradition. Burke-Gaffney's father was a notable figure in tropical medicine whose obituary in The Times ran to 21 column inches; and his mother was a nurse who became a wartime hospital superintendent.

Burke-Gaffney, who moves into his new post as the Red Cross is reviewing its role to meet changing social conditions, admits to winning a junior first aiders badge as a boy.

Harsh words

Public squabbles among the usually staid guardians of the U.S. Federal Reserve Bank are rare. Little wonder, then, that chairman Paul Volcker's attack last week on Preston Martin, his number two at the bank, set tongues wagging worldwide.

Volcker took time out from a Tokyo meeting to telephone Fed headquarters in Washington with his outspoken response to comments made to reporters by the Fed vice-chairman on the Third World debt position.

The cigar-chomping Fed chairman described Martin's comments as "incomprehensible" and dismissed as "unfortunate and unrealistic" his suggestions "that there are unorthodox approaches to deal with the international debt problem."

"What is hopeful and promising," Volcker added, "is that so many countries are coming to grips with necessary and difficult adjustment efforts. One example is the highly promising effort currently under way in Argentina."

Volcker's outburst was especially noteworthy since he is not known as someone who stoops to personal attacks. In many ways, he personifies the Fed's traditional close, collegiate atmosphere.

Though Martin has drawn private criticism in the past from Fed officials, angered by his frequent calls for an easier monetary stance, Volcker has never before publicly criticised him. Fed watchers have, therefore, been left pondering Volcker's motives in doing so now.

Speculation centres on two possibilities. Martin, a Reagan appointee, is often mentioned as possible successor to Volcker should the Fed chairman step down during this Administration. Some Wall Street observers suggested that Volcker may have launched the attack as a prelude to a succession battle on behalf of some other contender.

Others believe the outburst was prompted merely by concern over the timing of Martin's remarks and their impact on current negotiations with Third World debtor nations.

Bankers noted that Martin's comments—which included the suggestion that debtor nations' interest payments should be capped — might be viewed by countries like Argentina, which has just introduced a sweeping austerity programme, as a change in the current U.S. "case-by-case" strategy for dealing with the debt problem.

Whatever Volcker's motives, it seems likely that he and other Fed officials will want to paper over any differences of opinion within the ranks as quickly as possible. Volcker, himself, will have an opportunity to do so on Thursday when he makes one of his regular appearances on Capitol Hill before a Congressional committee.

Bid for glory

What price bravery? There will be one answer at Sotheby's on Thursday when an auction of medals and decorations will include the World War 1 Victoria Cross awarded to East Lancashire drummer S. J. Bent for his defence of a trench against repeated enemy attacks in 1914 after all his superiors had been killed or wounded.

Together with his other medals, it is expected to fetch between £8,000-£10,000.

Observer

FOREIGN AFFAIRS: THE MILAN SUMMIT

It's not business, it's politics

By Ian Davidson

THE NOVELTY of the European Community summit which takes place in Milan at the end of this week is that it is the first for many years which is not bedevilled by old quarrels. On the contrary, the heads of government will be free to debate the problems of the future: how to turn the Community into more of a common market; how to improve its decision-making processes, primarily by more majority voting; how to tackle the technology gap between Europe and Japan and the U.S.

The consequence of this relatively up-beat, forward-looking agenda is that it leaves the heads of government very exposed, in terms of success or failure. In the past they could always blame the Community's stagnation on the British budget quarrel, or the Spanish entry negotiations. Those excuses are no longer available. If they fail to come up with some agreements which offer plausible promise that the Community will be more dynamic, more successful and more beneficial to the member countries, we shall all know what to make of their rotund rhetoric. *We shall know that* they do not mean a word of it.

The British government is facing the challenge with energy and even enthusiasm. It has prepared umpteen proposals, papers and even "non-papers"; in Brussels its emissaries stride the corridors with firm step and cheerful countenance. One of them has even been known to exhort a continental opposite number to cheer up.

They are confident because they hope they have largely diverted the other member states from flirting with quasi-federalist rhetoric: no new treaties, please, no abandonment of the right of national veto, and above all no new legislative powers for the European Parliament. At the same time, they believe the bandwagon is rolling towards a freer internal market for goods and services, which should suit British interests. In short, pragmatism is winning: economic advantages without political concessions.

But there is a paradox in *all this. Mrs Thatcher's* government has employed every device of diplomacy, reason and "realism" to puncture dreams of a federalist leap forward. Perhaps, in terms of "realism," it is right to do so. But if it should succeed in persuading the other member states to march rapidly down the road towards a free internal market, then it is entirely likely that the process would require uncovenanted surrenders of national sovereignty which are so politically distasteful to Mrs Thatcher.

Take majority voting. It is obvious, and widely acknowledged, that negotiations on market liberalisation will get nowhere unless it becomes standard procedure, even on issues where the Rome Treaty requires unanimity. This the British government freely admits, with the obvious risk that it could be in the minority as often as in the majority. Or more often: a study of recent decisions suggested that majority voting might not have favoured British interests, narrowly conceived. If liberation of financial services is in British interests, perhaps it is less in the interests of others.

But there is more. As one of the minority of countries that explicitly wants to retain the right of national veto, Britain will be in a weaker negotiating position than countries which, *in principle*, want to abolish it. For it will not be able to prevent other governments calling for a vote when it suits them; but it will be morally obliged to vote with any government which invokes the right of veto. Net result: a greater surrender of sovereignty on issues which suit other countries than on those which suit Britain. This is not unfair; just the poetic backlash of Britain's endorsement of the right of national veto.

But let us suppose, against all the odds, that the British formula is accepted *and* succeeds in squaring the circle: the formal right of national veto is retained, but never brought out of the cupboard—majority voting rules OK? The first consequence is that the Commission automatically becomes more powerful, especially if it is led by an impressive figure like Jacques Delors.

Under a rule of unanimity, *either nothing is decided, or* else the Commission's proposals are continuously reworked by the member states. Under a majority regime, dissident governments have less leverage against the Commission — *especially* if they *support* the right of national veto.


Walter Hallstein

INDIRECT TAXES IN THE EEC

(as a percentage of GDP 1982)

Per cent	VAT	Excises total	VAT and Excises
Belgium	7.67	2.39	10.06
Denmark	9.84	5.87	15.71
Germany	6.34	2.70	9.04
France	9.19	2.22	11.41
Ireland	8.22	8.91	17.13
Italy	5.48	2.84	8.32
Luxembourg	6.04	4.24	10.28
Netherlands	6.83	2.36	9.19
UK	5.22	4.58	9.79
Weighted EC Average*	7.05	3.63	10.68

**Excluding Greece, where the necessary statistics were not available*

I do not suggest that this would be a bad thing; quite the contrary. For too long we have witnessed the wonderful achievements of unanimity and weak Commissions, which have enabled the continentals to withhold the liberalisation of financial services which would benefit Britain and *which is prescribed by the Rome Treaty.* But it may be important to understand the consequences of an irrational political posture.

Moreover, the Commission will probably become more influential, not merely in relation to the Council of Ministers, but also in the supervision of a fully liberated market. The removal of national restrictions on trade will throw up hosts of tiresome administrative problems, which the foreign ministers could not possibly hope to deal with. It is a fair bet that it will be necesary to set up oversight committees in Brussels, like the management committees in the farm policy, in which the Com*mission would have a dominant* position.

But let it pass. Majority voting rules, and all national restrictions on trade are swept away: is trade within the Community free and unimpeded? No, because differences in in*direct taxation and excise* duties, whose effects were partially concealed behind other, administrative restrictions, have now become more salient.

Lord Cockfield, Britain's renegade Euro-convert in the Commission, has spelled out the implications with brutal clarity. In his White Paper on the liberalisation of the internal market, he says: "The only conclusion that can be drawn is that no means exists of removing the frontier controls, and thus the frontiers, if there are significant tax and corresponding price differences between the member states."

In gross terms, Britain's dependence on the revenue from VAT and excise duties is not far from the Community average. Denmark and Ireland are much more heavily dependent, so harmonisation is likely to be more difficult for them. But if excise duties are taken separately, Britain joins Denmark and Ireland in the camp of the high taxers; VAT harmonisation would also raise problems for the zero-rating of a wide range of politically sensitive goods and services.

It is not that the Mother of Parliaments would necessarily have *to submit* British fiscal policy to majority decision in Brussels, nor even that there need be absolute uniformity in indirect taxes; American experience suggests that a discrepancy of up to five per cent may be small enough to avoid serious *trade distortions* or diversion. But if trade restrictions are to be removed, there has to be a degree of harmonisation, whether *it is* through negotiation, unilateral action, or a fudge between the two.

The British government is dead set against all ideas for joint decision-making between the Council of Ministers and the European Parliament, ostensibly because this would in effect prevent any decisions. Yet something may have to be done for the parliament, partly because majority voting would raise a serious question over the democratic legitimacy of Brussels decisions; but mainly because a parliament which remains frustrated by its minimal influence on decision-taking is likely to be obstructive.

If the parliament does not get a bigger role as part of the last word in the decision-taking process, it will have to get it as part of the first word; in other words, it will have to be more intimately involved with the Commission in formulating legislative proposals before they are presented to the Council of Ministers. Parliament has always been the natural ally of the Commission against the member states; an evolution of this kind could only reinforce that alliance.

Finally, the removal of restrictions on internal trade is bound to highlight the drawbacks of the British government's preference for not being part of the exchange rate mechanism of the European Monetary System. To be sure, there are problems and uncertainties, and they were rehearsed yet again with predictable smoothness last week by Mr Anthony Loehnis of the Bank of England. But the argument based on "uncertainties" is an argument for not being born; it does not dispose of the business requirement to have a more predictable exchange rate relationship with markets in Europe. If serious decisions are taken to move within five or seven years to an entirely free market, that business requirement cannot be smugly pigeonholed under the rubric: When The Time Is Ripe.

Of course, it is entirely conceivable that firm decisions will not be taken. No one seriously contests the intellectual case for making the Community a truly Common Market; a more dynamic trading environment may offer the only prospect for faster economic growth and a more vigorous European industry. But whereas free trade is part of Britain's traditional ideology, at least in theory, it is not one of the traditional *idees recues* in France. It requires a leap of faith to suppose that intellectual argument will persuade the member states to abandon attitudes to which they have *consistently clung for 15 years.*

But if they were to break with long-standing precedent, it is as well to recognise the consequences: there can be no economic advantages without political implications. As Walter Hallstein, first President of the Commission, used to say: "We are not in business, we are in politics."

Lombard

Fed aim still is lower dollar

By Samuel Brittan

WHILE the various economic think tanks and roving economic advisers have been advising European governments to increase their budget deficits to offset the expected fiscal retrenchment in the U.S., the reality has been very different.

This is that while the prospects of a major cut in the U.S. budget deficit are as cloudy as ever, the Fed has moved towards a fairly aggressive easing of policy. The most dramatic evidence of this is not in the movement of the rather sluggish prime rates, but that of more market-sensitive interest rates.

Although these rose somewhat on Thursday in response to the wildly unreliable "flash" estimate of second quarter GNP, they are still in the 6 to 8 per cent range and scarcely more than half the 1984 peak.

This has happened in advance of any clear progress in budget deficit reduction, and in the face of the large overshoot of the main measure of the U.S. money supply above its target range.

The Fed is clearly worried about U.S. growth. Even including the second quarter estimate, the U.S. growth rate over the past 12 months has averaged little more than 2 per cent a year — probably less than in the UK — and most revisions to GDP estimates have been downwards.

The main reason for the diminution of U.S. growth is not a falling-off in the growth of domestic demand (whether measured in real or money terms) but the siphoning-off of a growing proportion of this *demand towards imports* and away from U.S. products.

Final sales of U.S. domestic purchases have risen in the past 12 months by nearly 4 per cent a year — which is still almost a boom rate. The discrepancy between these figures and real GDP is accounted for by the surge in imports and relative weakness of exports.

Nor can there be any doubt that the dollar is still very high. Despite falling off from its January peak, the dollar remains higher against the mark, the yen and the currency basket than at almost any time in 1984 and about 15 per cent higher than the 1984 average.

There may be a temporary lull in the relaxation of Fed policy while stock is taken of the economic outlook. But the trend is still strongly towards greater ease.

The aim of the Fed is clearly to encourage a gentle slide of the dollar towards a level consistent with a better trade performance, and to reach it if possible in a soft landing rather than a big bang.

The U.S. central bank is able to get away with a policy of encouraging gradual depreciation, because the upsurge in *inflation*, forecast by most mainstream economists, including some in the Fed, has failed to materialise. Consumer price inflation remains below 4 per cent per annum.

The most orthodox reason for a good inflation prognosis is that the 1984 rise in the dollar was not fully reflected in import prices, as importers preferred to take the main benefit in higher profit margins. In that case the dollar can fall some way before foreign producers competing in U.S. markets start raising prices and make it easier *for their U.S. competitors* to do the same.

The least orthodox explanation comes from those U.S. "supply siders" who believe, on the basis of falling dollar commodity prices, that the real problem is deflation rather than inflation. Their view would find an echo in Cambridge, England, if with a different ideological resonance.

A third—and ultimately more encouraging—view voiced for instance by Professor John Kendrick in the AEI Economist, places most emphasis on the improvement in U.S. productivity and also the development of a more competitive labour market with a lower underlying (or NAIRU) rate of unemployment.

If other central banks want to encourage the continued expansion of U.S. *domestic* demand and help bring about a soft landing for the dollar, monetary rather than fiscal coordination will be the centre of the stage. Germany and Japan are probably running excessively tight budgetary policies; but the obsession of itinerant economists with the fiscal side should not obscure the monetary dimension.

Letters to the Editor

Business schools' financing

From the Director, Business Graduates Association

Sir, — The suggestion that business schools should be privatised (June 13) has been raised before and upon close examination has been in some respects found wanting.

Most business schools produce very healthy revenues from executive programmes, teaching on in-company courses and from consultancy and on that basis alone they could pay their way handsomely. The difficulty arises with the core elements of any university business school, its MBA course, its doctoral programme and its research. To be economic, MBA and PhD fees would need to be trebled from the set figure agreed nationally with Government across all subjects. To single out business degrees alone for such treatment in an educational culture used to subsidies for institutions and grants for students could easily be self-defeating for the national goal of producing more managers, at least in the short term.

Research falls into two categories. Applied research that is often already paid for by *industry, and basic research* which is not directly applicable at the time. This basic research is necessary for the development of business subjects and would need to be supported by philanthropic organisations, as in the U.S., if business schools were privatised.

There is, of course, a gleeful irony in asking business teaching institutions to reverse Bernard Shaw's dictum. I have no doubt that *if* business schools were privatised they would survive and prosper. Whether this would force cutbacks in research and a scramble for any student who could pay, resulting in variable standards and absentee teachers we cannot be sure. The present high quality and acceptability of UK business graduates is reflected by the fact that in our recent survey only three out of 700 respondents indicated any difficulty in obtaining jobs.

(Professor) J. A. Kennerley.
28, Margaret Street, W1.

Development at Ely Cathedral

From Messrs J. Bowman and C. Bex

Sir,— We are appalled at the plan by the Dean and Chapter of Ely to violate with building development some mature gardens and virgin pasture adjoining a precinct of the cathedral.

The threatened land is surrounded by development at the heart of the city and it provides an essential foil in a majestic view of the apsidal end of the cathedral which bristles with a multitude of piers and flying buttresses each crowned with a projecting gargoyle under an ornate stone pinnacle.

Recently it was retrieved to the world upon demolition of some derelict buildings nearby and until construction of a typically graceless supermarket subsequently, it could be enjoyed from the banks of the River Cam more than a mile distant.

That the scheme to augment the urban content of the ancient city arises principally to create money (to pay for repairs to the roofs of some neglected buildings in the custodianship of latter day aspirant prelate-developers) rather than from any sound principle of good planning, is monstrous and is indefensible.

James Bowman,
Colin Bex.
c/o 3 Churchfield Road, W3.

Small investors' costs

From Mr H. Bear

Sir,—I was amused to read your report (June 12) of Mr Lawson's lecture, urging, inter alia, the City to cut small investors' costs, when much of the stockbrokers institutional income will disappear.

As Mr D. Franklin (June 8) so rightly pointed out in regard to the taxing of income below *subsistence level*, our Chancellor, as many before him, is good at identifying problems but often fails to come up with the correct answers. Costs are a problem.

For 40 years I have dealt with sundry stockbrokers who are at their desks before 9 am, never seem to stop for food, and are still working at 5 pm. Most have also taken calls at home, even on Sunday evenings. I do not begrudge them their commission, which has to cover all of their office expenses, or the Treasury its 15 per cent VAT; I do begrudge the iniquitous 1 per cent stamp duty which I have to pay to the Treasury for doing absolutely nothing productive.

Last year the Chancellor, in his wisdom, reduced this duty from 2 per cent; why not abolish it and cut the cost of investing, up to £7,000 in ordinary shares, by over 34 per cent? That might even encourage the stockbroker to keep their charges down to present levels when scales are abolished.

If shares are to be sold "in the High Street," would the Chancellor, perhaps, prefer to include the Stock Exchange in the forthcoming Shops Bill, to increase competition and give the public the freedom to buy shares seven days a week? With so many tipsters writing in the weekend papers, Sunday could well become the Stock Exchange's most busy day. To complete the picture, and cater for the 10 per cent who reputedly still go to church, it would only remain to licence the vicars to deal in securities; as, traditionally, they are always among those left holding the "buy" recommendations when the bottom falls out of the market, they would no doubt welcome the opportunity of off-loading their shares on their flock; they could certainly do with the extra cash.

I am gravely disappointed with the Chancellor for not being able to work this out for himself, now that the Conservatives are liberalising everything! I am even more disappointed in the sure knowledge that he will continue to ignore my advice.

H. F. Bear.
71 Towncourt Crescent, Petts Wood, Orpington, Kent.

In praise of new issues

From Mr D. Hunter.

Sir,—The implied praise of the U.S. new issue system by Lex (June 21) is surprising. The "Abbey Life" piece suggests that there are no "hot deals" in the U.S. Although they have been few and far between recently, the U.S. investment banking and invest*ing community would happily* return to the spring of 1983 when a majority of deals opened at a significant premium.

UK investors however, would not welcome a system which allows the "hot deal" to be placed with the friends of the issuing house and the cold one to be placed by virtue of using high placing commissions; 5 per cent not being an unusual fee for persuading the unfortunate investors to part with their money. The placing system used in the U.S. was effectively banned in the UK after much adverse Press comment, some of which was justified.

The City may have a lot to learn from Wall Street but I do not think that new issue methodology is in this category. Our system provides a visible equality of opportunity which does not even pretend to exist in the U.S. High "after market" premiums can be avoided if so desired by using the "tender" method.

David Hunter.
L. Messel and Co.,
PO Box 521,
1, Finsbury Avenue EC2.

Applying for shares

From Mr D. Dickins

Sir,—As a genuine small investor, I am heartily sick of the way new issues are conducted. I repeatedly put in for the number of shares I want, only to find the issue swamped by big institutions and stags, resulting in a ballot in which I never (well, hardly ever) win.

Surely it would be quite easy to provide an option for those *who want shares for investment*, to qualify their application with an undertaking not to sell for, say, six months or a year, and to give them preference? The company would of course mark its registers accordingly.

Douglas Dickins,
2, Wessex Gardens, NW11.

Imported gas cookers

From the Director, National Gas Consumers' Council.

Sir,—Your report (June 18) on potentially dangerous cookers being imported from southern and eastern Europe highlighted a problem of considerable concern to this council.

Consumers ought to have the assurance that the gas appliances they buy are safe. In our view all cookers offered for sale should conform to basic safety standards, preferably those established by the British Standards Institution. There is an urgent need for this safety requirement to be mandatory and we have urged the Government to use powers available to it under existing legislation to make it so. It is quite unacceptable that imported cookers should gain competitive advantage over British counterparts by lowering safety standards.

John Hosker.
162, Regent Street, W1.

Private medical insurance

From Mr C. Green

Sir,—I was dismayed, but not entirely surprised to read (June 18) that the Association of Scientific, Technical and Managerial Staffs conference had decided to instruct its officials to bargain away private medical insurance schemes and to ban officials from negotiating deals incorporating such schemes.

Clearly what we have here is yet another example of how out of touch some unions are with their membership, since it is fair to assume that a large proportion of ASTMS white-collar members not only appreciate this type of benefit, but would most certainly expect their local representatives to negotiate such schemes.

With such obviously politically motivated policies being proposed, is it any wonder that ASTMS experiences difficulty in obtaining new members from the professional and managerial groups of workers?

Christopher J. Green.
77 Oakdale Road,
Downend, Bristol.

FINANCIAL TIMES
Monday June 24 1985

Terry Byland on Wall Street

Marking up the little banks

THE TURMOIL in the U.S. credit markets, highlighted last week by reductions in bank prime rates from 10 per cent to 9½ per cent, has put the banking stocks in the centre of the stage, but may have distracted attention from longer term, potentially more significant trends in the sector.

The cut in prime rates was a necessary reaction to the falling rates in the money market, which have cut the banks' own cost of funds and doubtless benefited earnings significantly for the second consecutive quarter.

In fact, Wall Street was inclined to dismiss the half point reduction as only a first instalment, with a further half point cut almost a foregone conclusion, but the rebound of 40 basis points in Treasury bills at the end of the week has dimmed the chances of another cut in prime rate just now.

The more reason, then, for investors to turn their attention back to regional bank stocks, which have so far responded slowly to the Supreme Court's important ruling on interstate banking.

The June 10 ruling effectively upheld the legality of regional interstate banking compacts. It was, at first glance, a setback for large money centre banks, which have been intentionally excluded from many state laws permitting interstate banking links. But a bill recently approved by the House banking committee would remove all interstate banking barriers after five years among states with reciprocal banking legislation.

Wall Street analysts were quick to respond to the implications for banks throughout the south-eastern states, which are now likely to form

Stock	Price	Market/Book
Florida Nat.	40½	145%
Pan American	31¼	148%
Baybanks	58⅞	130%
Central Bancorp	45¼	121%

powerful units, capable of developing independently of the money centre giants. A substantial move towards amalgamation is widely predicted, involving scores of mergers.

Regional bank stocks currently sell on around one and a quarter to one and a half times book value. There has already been activity in the market, aimed at bringing the laggards into line.

The market to book valuation of Florida national banks has moved up by 10 points since the Supreme Court ruling, according to statistics produced by Mr Thomas Hanley, the banking stock expert at Salomon Brothers. Its fellow Florida bank, Pan American Banks, has also moved further above its book value.

The strongest candidates for takeover activity, from the market's standpoint, seem to be in Georgia and Maryland. The stock price of First Railroad Banking, a Georgia bank, with assets of $3bn, has gained nearly 19 per cent since June 10, and now trades at 175 per cent of book.

The market seems to be upgrading its valuation of regional bank takeover targets to around 150 per cent of book value. Several stocks already trading in this range have made little move since the Supreme Court ruling. For instance, First Virginia Banks, standing at 178 per cent of book on June 10, has not stirred since.

But if this is to be the new rule of thumb for valuing the potential takeover targets, then several stocks are still out of line. First Fidelity Bancorp of New Jersey, with $10.7bn in assets, is a noticeably soft spot, trading at only 117 per cent of book, on a stock price barely changed since the court decision.

By the close of trading on Friday, short-term interest rates had returned to the levels ruling before last week's excitement. If prime, discount and other interest rates are going to take a back seat for a while, then investors will have the opportunity to take a closer look at the regional bank stocks.

U.S. bonds, Page 20

Strong growth forecast for British economy

BY MAX WILKINSON, ECONOMICS CORRESPONDENT

THE BRITISH economy is set for a strong performance this year, with inflation moderating after the summer months according to two influential forecasts out today.

The Confederation of British Industry (CBI) says its latest survey of manufaturing companies indicates that order books are still close to their strongest levels for eight years.

And yesterday, Mr David Wigglesworth, chairman of the CBI's economic situation committee, said the results indicated the whole economy would grow by 4 per cent this year, with a slower rate of price increases in the next four months.

This growth rate is significantly better than the Treasury was predicting in March and well ahead of the 3 per cent consensus of City of London forecasts.

It follows publication on Friday of the latest official estimate for gross domestic product in the first three months of the year. This suggested the economy was growing at an underlying annual rate of 3½ per cent, about ½ percentage point better than the preliminary estimate.

The London Business School's Centre for Economic Forecasting gives cautious support for this optimistic outlook. Its latest predictions, also out today, suggest the economy will grow by about 3½ per cent this year, with steady growth of about 2 per cent a year for the next three years.

It expects the turning point for unemployment to be reached in the next three months, when it predicts that 3.67m adults will be out of work. However, although the number of jobs available will increase steadily, it believes total unemployment will be reduced only to 2.82m by 1988.

The business school also believes that growth in the economy over the next few years will be too small to give the Government the scope to make the £3bn a year tax cuts it planned for the next three years in the run up to the next election.

The forecasters think public sector wage increases will push the Government's spending totals well above planned levels.

They also believe that the Government's oil revenues this year and next will be about £2bn less than predicted in the Budget, mainly because of the rise of sterling against the dollar. Oil prices are expected to be roughly unchanged in dollar terms.

Even without tax cuts it expects the Government would overshoot the borrowing figures set out in its medium term strategy, unless its privatisation programme were accelerated from the £2bn to £2½bn a year planned in its last White Paper.

In spite of these potential difficulties, the business school says that growing business confidence has carried the economy forward against the drag of tightened monetary policy. The ending of the miners' strike and the easing of interest rates from their "crisis level" in January both helped to improve the business climate, it says.

This improvement is underlined by the CBI's June survey of 1,700 companies, which indicated buoyant order books and a continued rising trend for output, with a significant easing of inflationary pressure over the next four months. Export orders also appeared to be well up on last year's levels although not quite as buoyant as in the spring.

On balance companies reported that their order books were close to "normal" levels, after eight years in which they were said to be "below normal." A balance of 23 per cent of firms expected output to rise over the next four months. This was slightly down from the peak of 28 per cent in March, but well up on the response last autumn.

Baxter Travenol may launch rival bid for American Hospital

BY PAUL TAYLOR IN NEW YORK

BAXTER TRAVENOL Laboratories, the U.S. health care products group, has challenged the proposed stock-swap merger of American Hospital Supply and Hospital Corporation of America (HCA) by suggesting a counter bid for American Hospital worth over $3.5bn in cash and paper.

The surprise proposal appears to set up the possibility of a bid battle for American Hospital, although it could also trigger an extensive share-swap defence by American Hospital and HCA.

The proposed counter-offer, contained in a letter from Mr Vernon Loucks, Baxter Travenol's president and chief executive, sent to Mr Karl Bays, chairman and chief executive of American Hospital, would create a giant hospital supply group with sales of over $5bn a year.

Under the terms of the Baxter Travenol Proposal, it would offer 3.01 Baxter Travenol shares per American Hospital share for up to 50 per cent of American Hospital and $50 in cash for each remaining share. American Hospital's shares, which have been depressed since the previous merger deal was announced, closed up $2⅝ on Friday at $37 while Baxter Travenol's stock fell 75 cents to $15⅝.

Baxter Travenol's move appears to be a direct, but so far friendly, challenge to the April merger agreement signed between American Hospital and HCA, the nation's largest hospital operator with earnings last year of $296.8m on revenues of $4.18bn.

Under that agreement, which would create a new group with assets of $7bn and revenues of $7.6bn, American Hospital's 72.6m outstanding shares would each be converted into three-quarters of a share in the new merged company and each of HCA's 88.1m outstanding shares would be converted on a one-for-one basis.

American Hospital noted yesterday that the agreement with HCA also provides for an exchange of stock between American Hospital and HCA under certain conditions, including a public offer by a third party. Under this "shut-out" clause either American Hospital or HCA could trigger a provision under which American Hospital would issue and deliver to HCA 39m shares, or about 35 per cent of the then outstanding common, stock, in return for 29.5m newly issued HCA shares or about 25 per cent of the company.

American Hospital noted that "it is unclear how Baxter Travenol would adjust its proposed bid if the share exchange between American Hospital and HCA does take place," and noted that if the terms remained the same Baxter Travenol would to issue 168m shares, or more than double the number of shares it currently has outstanding.

The Illinois-based group also noted that the Baxter Travenol proposal will remain open for consideration until July 5. Baxter Travenol, with 1983 revenues of $1.8bn, is considerably smaller than American Hospital, which reported net earnings last year of $237.8m on sales of $3.45bn.

EEC technology plan

Continued from Page 1

the UK and West Germany, determined to enforce strict budgetary discipline.

The idea of an EEC initiative for co-operation was given support last week by Unice, the European employers' organisation. Lord Pennock, the Unice president and deputy chairman of UK electronics group Plessey, said the co-operation was needed not only in research but also to an even greater extent in development: putting the basic research ideas into practice.

Speaking after an executive meeting of his organisation in Brussels, Lord Pennock said there might be occasions when European co-operation in research and development conflicted with the strict interpretation of EEC competition rules. This should be taken into account in drafting the framework for future work, he said.

Lord Pennock will be meeting Sig Bettino Craxi, the Italian Prime Minister, tomorrow to press the employers' principal concerns, to urge the Milan summit to agree on the proposed deadline of 1992 for completion of a barrier-free internal market in the EEC, as well as an agreed high technology strategy.

The European Commission plans will include proposals for the most appropriate areas for research co-operation.

M Delors told the energy committee of the European Parliament last week that a Community structure for research was needed in order to negotiate with Japan and the U.S.

Air India Jumbo crash

Continued from Page 1

yesterday. The pilot gave no distress or mayday message after his routine and trouble-free message only eight minutes earlier.

The lack of a distess message suggests the pilots were incapacitated immediate. This could have been the result of a sudden and fatal decompression of the aircraft or its instantaneous disintegration by structural failure, or an explosion.

The Jumbo was cruising at 31,000 feet and 550 mph when radar contact was lost.

A pilot's first responsibility in the event of decompression is to protect himself to keep control of the airliner and then execute a rapid descent. An emergency button to transmit a pre-recorded mayday radio message is under his thumb on the aircraft control column.

Pritzker agrees to pay $400m for Conwood

By Terry Dodsworth in New York

THE Pritzker family of Chicago, one of the leading private investment groups in the U.S., is broadening its range of activities with the $400m acquisition of Conwood, a major producer of smokeless tobacco products.

Conwood is to be merged with Dalfort Corporation, one of the Pritzker family holding companies, which also runs Braniff, the airline rescued by the Pritzkers two years ago, and the Hyatt hotel group.

Under the terms of the deal the Pritzkers are paying $36 a share for Conwood, whose shares jumped by $2.75 in dealings on the New York Stock Exchange on Friday to close at $34¾. Last year the company made net profits of $28.7m, or $2.63 a share, on sales of $198.m, against $22.9m, or $2.06 a share, on sales of $193.7m in the previous year.

Conwood has been subject to takeover speculation for some time, following abortive talks with Gulf Broadcasting last year, when it was almost acquired for $33.50 a share. Sales of smokeless tobacco products, which include chewing tobacco and snuff, are growing quite strongly in the U.S., particularly in the south, while cigarette sales are declining steadily.

World Weather

		°C	°F
Ajaccio	S	24	75
Akrotiri	S	27	81
Algiers	S	30	86
Amsterdam	C	13	55
Athens	S	27	81
Bahrain	S	31	91
Bangkok	C	32	92
Barcelona	F	21	70
Beirut	F	28	82
Belgrade	F	21	70
Berlin	R	16	61
Biarritz	C	20	68
Blackpool	C	13	55
Bordeaux	R	16	61
Brussels	F	17	63
Budapest	R	16	61
B Aires	C	19	66
Cairo	S	32	90
Cape Town	S	15	59
[illegible]	C	28	82
[illegible]	C	22	72
[illegible]	F	17	63
[illegible]	F	23	73
[illegible]	C	15	59

		°C	°F
Dubrovnik	F	23	73
Faro	S	23	73
Florence	C	22	72
Frankfurt	C	16	61
Funchal	C	22	72
Geneva	F	18	64
Gibraltar	S	23	73
Guernsey	C	13	55
Helsinki	F	23	73
H Kong	R	31	88
Innsbruck	F	16	61
Inverness	F	19	64
Istanbul	S	24	75
Jersey	C	15	59
Jo'burg	F	19	66
Las Palmas	C	24	75
Lima	C	19	66
Lisbon	F	22	72
Locarno	S	23	73
London	F	17	63
Los Angeles	C	20	68
Luxembourg	C	13	55
Madrid	S	28	82
Majorca	S	25	77

		°C	°F
Malaga	S	24	75
Malta	S	29	84
Manila	R	28	82
Miami	C	31	88
Milan	S	22	72
Moscow	C	19	66
Munich	C	13	55
Nairobi	—	—	—
Naples	F	25	77
New Delhi	S	39	102
New York	F	27	80
Nice	S	22	72
Oporto	F	20	68
Oslo	T	18	64
Paris	C	14	57
Prague	R	15	59
Reykjavik	S	11	52
Rio de J'o	C	30	86
Rome	F	24	75

		°C	°F
Salzburg	C	13	55
Seoul	C	27	81
Singapore	R	32	90
Stockholm	S	26	79
Strasbourg	F	18	64
Sydney	S	14	57
Taipei	R	30	86
Tangier	S	23	73
Tehran	—	—	—
Tel Aviv	S	28	82
Tenerife	S	25	77
Tokyo	C	27	81
Toronto	R	21	70
Tunis	S	29	84
Valencia	F	16	61
Venice	S	20	68
Vienna	C	15	59
Warsaw	C	23	73
Zurich	F	15	59

Readings at mid-day yesterday:

C-Cloudy D-Drizzle F-Fair Fg-Fog R-Rain S-Sun Sl-Sleet Sn-Snow T-Thunder

UK export aid probe

Continued from Page 1

The Whitehall committee is expected to make recommendations about the relative size of ATP, about the efficiency of the approval system – which involves three departments and has been criticised for its slowness – and about the appropriateness of the development criteria used by the Overseas Development Administration.

The approval system has already been slightly modified in respect of some South East Asian markets, allowing the UK to initiate and not merely match a rival government's soft loan offer. These markets are regarded as already "spoiled" by subsidies.

The Government's declared policy to date has been to seek international curbs on the export subsidy war, and not to disarm Britain unilaterally.

However exporters and some MPs have been accusing the Treasury and to a lesser extent the Overseas Development Administration of being less than wholehearted in their support.

The recent loss of the Bosporous Bridge contract in Turkey to the Japanese – although it was lost on price – has further stirred an 18 month-long controversy over export subsidies between industry and the Government.

Currency options battle looms in London

By Barry Riley in London

THE BATTLE for the London market in traded currency options gets under way on Thursday with the launch of a sterling-dollar options contract by the London International Financial Futures Exchange (Liffe).

Some six weeks' lead has been gained by the London Stock Exchange, which began trading its own sterling-dollar option on May 16. Last week the stock exchange launched its second currency option, a dollar/D-Mark contract.

Most observers think it unlikely that both markets can succeed side-by-side in the same financial centre. "There isn't room for both of us," said a broker at one of the leading stock exchange firms specialising in options.

Liffe's chief executive, Mr Michael Jenkins, admits that a fight lies ahead. "What tends to happen in one time zone is that one market has better liquidity and the business tends to gravitate to that one" he said last week.

Both markets are offering comparable contracts, although Liffe's is twice as big at £25,000 ($31,500), and the futures market is offering a new type of margining facility which it hopes will attract more trading and boost liquidity.

Not only is Liffe starting second, but it has failed to make much of an impact with its existing currency futures contracts. Moreover, it has no previous experience in options, though it is launching another – an option on its successful Eurodollar futures contract – on the same day as its entry into currency options.

On the other hand, it has been able to attract a large number of members to its new options section, which is constituted as a separate company called Liffe Options. Some 113 trading firms have bought a total of 150 permits to trade (each individual trader must be backed by a permit).

In all, 105 existing members of Liffe and eight new members have paid over £1m to join the options market. "It's better than we planned for. We've been very pleased with the support," Mr Jenkins said.

Mr Jenkins also points to the large attendance at educational courses run by Liffe, including corporate treasurers who never came to similar courses on the use of currency futures.

The presence of a large number of banks and other financial institutions among Liffe's membership is a hopeful sign for its new traded currency options activity. Only two or three banks have so far joined the stock exchange's options market, although the rules were specially relaxed to allow in firms that were not members of the parent exchange.

But the stock exchange's volume in sterling-denominated options is regarded as encouraging, at an average of 850 contracts a day so far.

Initial volume in the dollar-D-mark contract has been less auspicious. Only 128 contracts were traded on Friday, for example.

The stock exchange is pinning its main hopes on the benefits of a planned link with the Philadelphia Stock Exchange, which trades large volumes of currency option contracts, with an estimated 40 per cent of the business originating from Europe.

Philadelphia at present trades six currency classes, and recent volumes have been running at over 300,000 contracts a month. In the autumn, the London and Philadelphia markets are aiming at "fungibility" so that positions taken out in one can be closed in the other.

Effectively, this will create a trading day of 11¼ hours running from 8.15am London time to 2.30pm eastern standard time in Philadelphia.

Liffe's executives have given a lot of thought to the creation of trading connections with other markets – it has also had discussions with Philadelphia, for example – but there are no prospective links in view at present.

"We didn't want to use the Philadelphia clearing and margining arrangements," Mr Jenkins said. "On balance, we felt it was better to go our own way. But links could develop in due course with other U.S. exchanges."

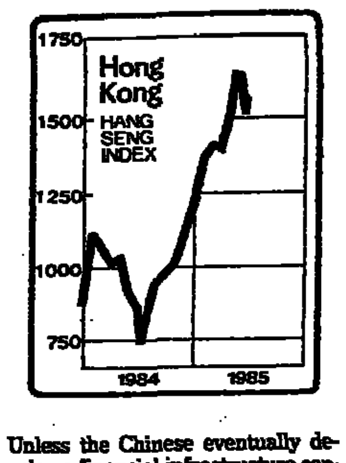
In any case, some observers argue that Philadelphia is vulnerable to increasing competition from other markets in the U.S., where the Chicago Board Options Exchange is expected to move into currency options in the autumn.

But in London the confrontation begins in earnest on Thursday, when Mr Norman Tebbit, Britain's Secretary of State for Trade and Industry, will give the signal for the trading pit to be catapulted into noisy action.

According to Mr Jenkins, it will take some time for the winning market to emerge. The out-turn will depend on the liquidity experienced by users of the market.

THE LEX COLUMN

Bulls in the China shop



Before last year's settlement cleared the air, Hong Kong was a market so dominated by the distant prospect of 1997 that investors could be confident only in one thing; at around 750 last summer, the Hang Seng index was either much too low or fiendishly inflated. By shortening the investor's focus, the Howe agreement made it possible to value the market on a slightly less irrational basis; prices have since doubled.

One facet of this change is that Hong Kong has moved from being mesmerised by the vision of China as a political menace, to seeing the country as an enormous commercial opportunity. Though the deep-seated worry about a Great Leap Backward in Peking has not been eradicated – nor should be – a much more present consideration is that China's shortage of hard currency will mean a clamp down on exports to the mainland.

Regulation

The revival of confidence in the colony's financial system – supported by a tightening property market – has given a new lease of life to the old ambition of capturing the Far Eastern slot in the 24-hour world financial market. Here, too, immediate problems have erupted to obscure an attractive long-term prospect. Just as Tokyo is starting to look a fraction less arthritic, the collapse of Hong Kong's inappositely-named Overseas Trust Bank has reminded everyone that the posting of Red Guards in Central District is not the only threat to Hong Kong's free-and-easy market place; higher-profile banking supervision could also cramp its style.

New banking rules are indeed shortly to tighten up liquidity and capital ratios as well as reporting requirements. It must be hoped that stiffer regulation will on balance have a positive effect on Hong Kong's future as a financial centre, mainly by making foreign banks fell easier about putting their money out in the local interbank market. But there is also a worry that any move in this direction will tend to restrict liquidity before it has much effect on the more inventive activities of the OTBs.

Perhaps it would be asking too much for Hong Kong to make the most of its traditional financial role and also reap the full benefits of its position as a conduit to the rapidly liberalising mainland economy. Unless the Chinese eventually develop a financial infrastructure capable of handling their capital needs, Hong Kong is none the less likely to retain this role. And until the Shanghai stock market is able to give Hong Kong a run for its money (several decades hence, at the earliest) investors looking for the purest forms of China-play may have to put their money in Hong Kong utilities – such as China Light – or into companies like New World, with its involvement in mainland property development.

If Hong Kong is ever to be challenged by Shanghai, however, it is bound to have enjoyed a pretty good run first: neither foreign investors nor the Chinese can afford to ignore the only ready-made entrepôt they have got. For a broad spread of international investors, many of them not previously exposed to the virtues of colonial Hong Kong, the draft agreement opened up the market in Hong Kong equities as the most direct available way into China. And on a multiple of about 6 – last summer – it was a decidedly cheap way in, risks included.

Like almost every other economy, though, Hong Kong will slow down this year. About 85 per cent of manufactured goods are exported and 40 per cent of these generally go to the U.S. So far this year, demand from China has managed to make up some of the shortfall caused by America's slowdown. Five years ago, China was Hong Kong's 38th largest trading partner, including re-exports. By early last year, it had moved up to fourth place and it reached second by the end. Since the beginning of 1985, it has been top of the league; and whatever the currency constraints on Peking nobody expects the cancellation of contracts which disfigured relations five years back.

If domestic demand can take up at least some of the slack left by falling exports, the Hong Kong economy should grow by around 7 per cent this year, still higher than most of the rest of the world. With the mortgage rate down to 9½ per cent from nearly 20 per cent last July, demand for residential properties and the goods to fill them has been rising all year.

As ever, property remains the key to the Hong Kong equity market. With the legal position of leaseholders uncertain until the Sino-British agreement was signed, property prices halved between 1981 and 1984. It was not until the beginning of this year that a recovery started to emerge. In the central office district, there is still over-supply, probably enough to last another couple of years. But second-tier office space and residential properties have seen much improved demand, with price rises of up to 20 per cent in the last few months.

Leverage

Property companies' asset values were written down so sharply in 1982 that there may be room for write-backs in the next few years. Corporate profits, meanwhile, are expected to rise by around 15 per cent to 20 per cent, leaving the market on an average p/e of 12 to 13 times 1985 earnings. While nobody expects a boom year like 1981, the increases in property demand augur well for a sustained price-rise in the next few years.

So long as OTB is not the first domino in a new sequence of banking failures, that should permit local equity investors to get back on the exciting treadmill which turns property revaluations directly into higher share prices across half the Hang Seng – and provides security for the borrowing which levers up the other half. Once this machine starts turning, and Chinese money is flowing into the colony rather than out, the market can cope with the inevitable rights issues easily enough – it has taken over HK$2bn ($198m) so far this year, almost as much as for the whole of 1984. But in Hong Kong, some things do not change; one false step can still be more than enough.

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SECTION II – COMPANIES AND MARKETS
FINANCIAL TIMES
Monday June 24 1985

Coca-Cola facility puts some fizz into Euronote market

BY OUR EUROMARKETS CORRESPONDENT IN LONDON

COCA-COLA brought a little fizz to the Euronote market last week with a $365m facility designed to refinance receivables owing to its Columbia Pictures unit from the sale of television and film productions.

The four-year deal, which is being handled by Salomon Brothers, is a rare offering in this market from a top-notch company, although it is structured in an unusual way designed to remove the receivables from Coca-Cola's own balance sheet.

A separate company, EBS Finance Corporation, has been formed to buy the receivables, and it will be the borrower. The facility will be secured against the receivables whose payment is guaranteed by Coca-Cola, making the deal effectively a Coca-Cola risk although there is no formal guarantee.

Terms on the deal provide for a 6¼ basis point fee, and the notes will be sold for a maximum yield of ⅛ point over the London interbank offered rate for Eurodollar deposits (Libor), though underwriters will *receive an additional ⅛ point utilisation* fee if they have to take up more than half the paper.

The deal was a further reminder of how dependent the Euronote market has become on U.S. business, though bankers now say a number of British companies, including Trusthouse Forte, are now looking seriously at the Euronote market. Trusthouse would not comment on the reports on Friday.

Persuading British companies to enter the market has been a slow process of education, bankers say, and it is not helped by the fact that the Bank of England still does not allow sterling Euronotes of less than one year. Although dollar paper can be swapped into sterling, this is a more complex process than if sterling was the original currency of issue.

Elsewhere, Chase Manhattan is arranged a $180m refinancing for Spain's state finance house ICO, which is seeking lower rates on a $200m credit arranged in 1981, $20m of which will be prepaid. The new deal is for 10 years with a six-year grace period and up to half of it can bear a margin of ⅜ point over the U.S. domestic CD rate with the rest priced at a ¼ per cent over Libor for the first two years rising to ⅜ points thereafter. The credit, ICO's third refinancing and its largest to date, currently carries interest at a margin of ⅜ point over Libor. Agent will be Industrial Bank of Japan.

Chase, whose $1.5bn refinancing for Sweden was $300m oversubscribed last Friday, is also arranging a smaller $90m refinancing for the Spanish private-sector utility Iberduero, while Lloyds Bank is in the market with a £30m bankers acceptance facility for Hoogovens, the Dutch steel producer.

In Latin America the World Bank has confirmed that it is to guarantee $150m in loans for Chile as part of a financing package now being *finalised with creditor banks in* New York. The guarantees will form part of a $300m co-financing for a highway project for which the bank is separately putting up $140m. Further details of the rescheduling may be agreed this week, though one sticking point remains creditor banks' insistence that the Government guarantee private-sector debt whose repayment is to be deferred.

Originally the World Bank was considering $250m in guarantees unconnected to a co-financing, but this ran into opposition from the U.S. and the lower amount was finally confirmed after the Government of President Augusto Pinochet lifted its state of siege last week. The unguaranteed portion of Chile's new bank loans is expected to rise to around $950m from an original $800m as a consequence of this change.

Banca del Gottardo in share offering

By Our Euromarkets Correspondent

SWITZERLAND'S Banca del Gottardo is offering 60,000 bearer shares worth around SwFr 37m for sale in the Euromarkets through a group of banks led by Swiss Bank Corporation International.

The deal, the latest in a growing series of Euro-equity offerings, is intended to broaden the range of the bank's shareholders and does *not involve the sale of* any new equity.

Instead the bank has bought the shares from the portfolios of its own customers where it felt they were too closely concentrated and is now reoffering them to the public. The price of the issue will be set at the Zurich closing level next Friday. Last week the shares finished at SwFr 614.

The deal will not change the controlling stake held by Japan's Sumitomo Bank of 52.67 per cent.

● The Bank of Finland, the country's central bank, has banned with effect from today foreign sales of quoted bonds. The ban, which will apply until further notice, is intended to shelter domestic monetary policy from a strong influx of funds from abroad, writes Our Financial Staff.

Finnish corporate borrowers have been able in recent months to obtain medium to long-term financing through the sale of bonds abroad at rates as much as 1 percentage point below the cost of short-term money market funds, now above 13½ per cent.

Until now, Finnish borrowers have not had to obtain clearance from the authorities to sell bonds outside the country, although the central bank regulates other capital inflows.

Dollar issues end week on a bleak note

BY PETER MONTAGNON, EUROMARKETS CORRESPONDENT, IN LONDON

PRELIMINARY estimates showing a second-quarter U.S. growth rate of 3.1 per cent and a $4.8bn weekly surge in M-1 money supply turned out to be bad news for the Eurobond market last week.

On Friday prices of fixed-rate dollar issues fell sharply, by as much as ¾ points in some cases. The few new bonds that had come to the market earlier were left trading badly outside their fees. The newly increased 10 per cent Electricité de France slid to a discount of 4 per cent, for example, but other prestigious names were hit hard too. Procter & Gamble were at less 3½ and Eurofima at less 3¾ per cent.

The problem was that the economic and monetary data were enough to shake the faith of even the most fervent supporter of lower interest rates. And with Wall Street now looking to a heavy U.S. Treasury funding programme this week, the outlook is not all that bright.

Worse still, issue managers spent so much time last week working over alternative sectors such as floating-rate notes and other currency issues that there may not be that much more scope for new business there. At all events the massive flow of international bond issues almost came to an abrupt halt on Friday as the U.S. data was absorbed.

But one that did appear was a highly successful capped floater for Mitsui Bank which started off at just $100m and was increased on issue to $150m. Westpac Banking's issue of Thursday was also increased by the same amount. That seems to give the lie to those who had argued earlier that the maximum coupon feature on these bonds had been overdone in a glut of issues which last week totalled $1.18bn.

The truth is a little more complex, however, as the weak performance of some other issues for Allied-Irish and Crédit Lyonnais shows. In fact, Westpac had never launched a floater before, and this was only the second deal from Mitsui. Both therefore found a ready market from buyers wishing to take on new risk.

While some more capped floaters are expected, the sector is now regarded as vulnerable, particularly in the light of rising short-term rates which make the caps look rather dangerous. Logic would suggest that the caps should therefore rise to keep them remote from current levels. In fact, they are tending to fall as the swap market tightens. Mitsui's cap was just 12¾ per cent whereas most of the previous issues had been set at 13.

By contrast the much derided mismatch floaters have been helped by rising short-term rates as the yield curve steepened. Belgium's $400m issue was launched when the difference between the two reference rates of six-month Libid and one-month Libor was ¼ per cent. By Friday the gap had widened to ⅜, adding to potential returns and the bonds, though hardly a sell-out, were trading comfortably within their 42½ point fees.

Many non-dollar sectors have also been showing signs of fatigue as the uncertain interest-rate trend is compounded by worries over the dollar strengthening again, producing currency losses for investors as well. The Ecu market has been going through a period of consolidation and is still overloaded with new paper.

Last week's jumbo for All Nippon Airways totalling Ecu 130m was a slow mover as a result. It bears a coupon of 9 per cent, and as a sign that rates might be edging up again Union Bank of Finland hit the market on Friday for a small Ecu 15m deal at a ¼ per cent.

German and Swiss markets were little changed last week with the flow of new issues particularly reduced in Germany where Inter-American Development Bank's DM 250m, 7¼ per cent issue was well received. *It is one of the few top quality* names to tap the market in recent weeks. Chemical Bank is leading its first ever Swiss issue in the form of a SwFr 130m 10-year deal for Kinder-Care, the Alabama-based giant of the U.S. day-nursery business. Proceeds are to be swapped into dollars.

In the New Zealand dollar sector a perplexing feature was the weakness of an earlier issue for BP, which was trading at a discount of 5 basis points despite its short, three-year life. This humiliation for such a prestigious name is particularly *strange because some other deals* have done much better.

EUROMARKET TURNOVER
Turnover ($m)

	Straights	Conv	FRN	Other
Primary Market				
U.S.$	2,518.0	3.8	2,680.8	109.4
Prev	2,884.1	4.7	3,075.8	119.8
Other	594.9	—	662.8	1.4
Prev	881.9	1.5	5.9	79.9
Secondary Market				
U.S.$	23,074.5	784.7	9,715.6	2,128.3
Prev	29,934.0	1,129.0	16,170.3	3,286.2
Other	4,115.4	91.4	367.4	1,282.7
Prev	4,070.0	70.2	470.1	1,514.3

	Cedel	Euroclear	Total
U.S.$	13,448.7	27,566.1	41,014.8
Prev	18,301.1	38,282.7	56,583.8
Other	3,624.3	3,492.0	7,116.3
Prev	3,978.8	3,115.0	7,093.8

Week to June 20 1985 — *Source: AIBD*

Bankers argue that this may be because these deals are particularly orientated towards the high-coupon seeking retail market. And that means the names need to be well chosen and familiar to smaller investors in the geographic locations where such buying originates.

That may, for example, also explain the success of last week's Australian dollar issues for Commonwealth Bank of Australia and First Austrian. The first is Australian risk popular in Switzerland, the second a well-known Austrian name that trips easily off the tongue of even the lowest paid dentist in Appenzell.

For the world at large, however, the message is clear. From floaters to Australian dollar bonds, buyers have become selective, and that is always a sign that the underlying market is volatile and uncertain.

In that situation the golden rule applies even more than ever. To succeed, issues must be from the right borrower, in the right market and at the right price. Norsk Hydro pointed the way with what was perhaps the star deal of last week. Its Danish Crown issue was the first such bond for three weeks. On Friday it was increased by DKr 50m and still it traded 2½ points above its issue price of par.

Beatrice earnings down 20%

BY PAUL TAYLOR IN NEW YORK

BEATRICE Companies, the Chicago-based food and consumer products group which last year acquired Esmark in a $2.4bn deal and has since been undergoing a major restructuring, suffered a 20 per cent decline in fiscal first-quarter net earnings.

The group blamed the fall on higher interest expense and other costs stemming from the Esmark takeover but said the quarterly results "exceeded our expectations." Beatrice added that it was "encouraged" by the positive trends in many of its businesses in the light of heavy competition and said operating earnings increased by 31 per cent in the latest period to $233m.

In the quarter ended May 31, net earnings fell to $58m, or 59 cents a share, from $72m, or 76 cents, in the year-ago period. Sales grew by 39 per cent to $3.1bn from $2.2bn, reflecting the Esmark acquisition which was completed in the fiscal second quarter last year.

On a pro-forma basis, results from continuing operations showed a 1 per cent increase in sales from a year earlier while net earnings increased by 11 per cent.

Mr James Dutt, chairman and chief executive, said the company had made good progress in the integration of businesses resulting from the Esmark purchase. He added that the group had now completed about 80 per cent of its aggressive asset divestiture programme started in July last year and aimed at generating $2bn in proceeds to reduce debt.

Further asset sales by Philippine group

BY LEO GONZAGA IN MANILA

FIRST Philippine Holdings, a Philippines group with industrial and engineering interests, plans further asset sales to raise badly-needed cash with which to pay off its debts of about 700m pesos ($37m).

After two divestment moves in favour of partly or wholly-owned Dutch buyers, First Holdings is putting more investments on the auction block.

These are its 51 per cent stake in Philippine Electric, whose plant in Taytay, Rizal Province, makes electric transformers, motor and protective devices, its 60 per cent stake in First Philippine Industrial which operates an oil pipeline between Manila and Batangas province, and unspecified stakes in two Manila-based companies, Engineering and Construction Company of Asia and Warner Barnes, a trading group.

Last week, First Holdings sold for 206.6m pesos its 28.5 per cent stakes in Philippine Petroleum

INTERNATIONAL CAPITAL MARKETS

U.S. MONEY AND CREDIT

Economic data turns euphoria to dismay

A SHARP swing in U.S. credit market perceptions last week sent U.S. bond prices riding the see-saw of expectations — ending up with a resounding bump on the downside as a sweeping sell-off took hold.

By the close on Friday night, after an unexpectedly strong "flash" estimate of gross national product growth in the second quarter, a huge $4.8bn jump in M1, the basic money supply measure, and widespread disappointment about the lack of a Fed discount rate cut, bond prices were between 1½ to 3½ points lower on the week and short-term rates were sharply higher.

Wednesday marked *at least* a temporary turning point for the markets. Earlier in the week optimism was running high that the Fed would ease again in an effort to revive a flagging economy and cut the discount rate by half a percentage point to 7 per cent.

These hopes were bolstered first by a very weak Fed funds rate, which fell below the 7 per cent level, with only minimum intervention from the U.S. central bank to prop it up, and by *further* economic indicators, including a 13.7 per cent decline in May housing starts.

Adding to the market's near-euphoric mood the banks — catching up the pronounced decline in funding costs brought about by the recent rally — cut the prime lending rate by half a percentage point to 9.5 per cent — the lowest level for the benchmark corporate lending rate since September 1978.

The Treasury long bond yield, tracking this wave of bullish sentiment, dropped to 10.23 per cent on Tuesday night. But investors got the jitters, as it turns out, probably for good reason. By the close the next day, hopes of a below-10 per cent long bond yield had evaporated.

In the process, Dr Albert Wojnilower, First Boston's chief economist, had warned on Wednesday that "viewed as a whole, the economy continues to perform well and the outlook is good." *With immaculate timing,* he also warned that earlier statistics had "substantially underestimated the level and growth of GNP."

Dr Wojnilower added: "Some acceleration of GPNP growth in the second half of 1985 seems probable — enough to meet the *official goals of 3-4 per cent* — but it will be more modest than might have been."

Finally, he noted: "Interest rates have probably overshot somewhat on the downside, but that may not prevent them from continuing to fall so long as market participants perceive even a sporting chance that the economy might weaken."

Some market participants, however, were not in a betting mood. The credit market actualy sold off ahead of the GNP flash number, which then clocked in on Thursday morning at an unexpectedly strong 3.1 per cent. By the close on Friday bond prices had sunk further following the 4.8bn M1 increase — more than double the amount market analysts had expected.

The two numbers dealt the markets a "double-whammy" —all but *dispelling* hopes of a Friday-night discount rate cut. Friday came and passed without a discount rate cut and the price retreat turned into a rout.

Picking up the pieces at the end of the week Dr Henry Kaufman of Salomon Brothers noted that the flash GNP estimate and the M1 number suggest "that at least part of the rapid growth of money in recent months reflects an improvement in the pace of economic activity and not just a heightened preference for liquidity."

He concluded: "Considering these developments, a further cut in the discount rate is now unlikely." Accordingly, Dr Kaufman is predicting a rebound in the funds rate back towards the 7.5 per cent level

The markets do however face an immediate test of their resolve. After swallowing $9.5bn of two-year notes at an average yield of 8.51 per cent on Tuesday, the markets will this week be presented with the Treasury's $17bn end-quarter mini-refunding. The refunding kicks off tomorrow with the sale of $6.5bn in four-year notes followed by $6bn of seven-year notes on Wednesday and $4.5bn of 20-year bonds on Thursday.

Thursday is also the day Mr Paul Volcker, the Fed chairman, goes back to Capitol Hill to give testimony before a joint congressional committee. The hearing could provide him with the opportunity not only to paper over differences with Mr Preston Martin, the Fed vice-chairman, on the international debt position, highlighted last week in an unprecedented critical public outburst by Mr Volcker against his colleague, but also to rehearse his crucial mid-July Humphrey-Hawkins monetary policy testimony.

Paul Taylor

U.S. MONEY MARKET RATES (%)

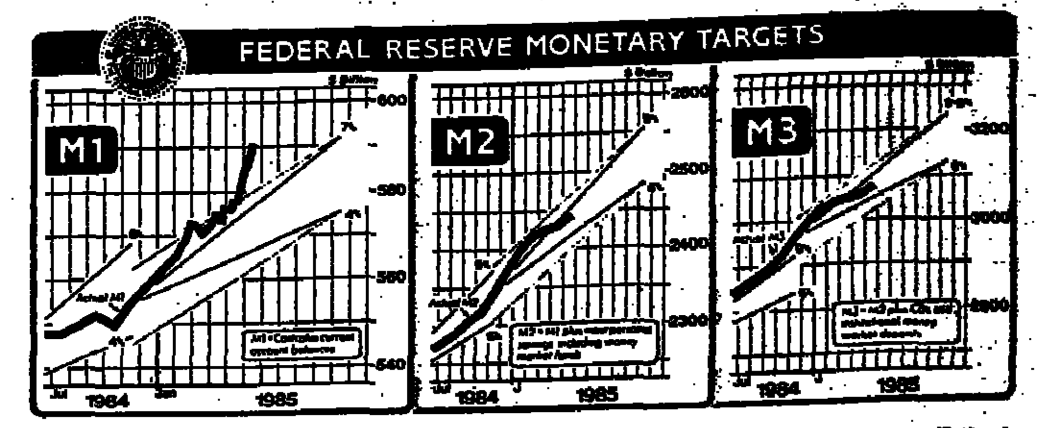
	Last Friday	1 week ago	4 wks ago	12-month High	12-month Low
Fed Funds (weekly average)	7.09	7.49	7.88	11.77	7.09
Three-month Treasury bills	7.04	6.69	7.17	10.77	6.67
Six-month Treasury bills	7.22	6.85	7.38	10.83	6.81
Three-month prime CDs	7.60	7.42	7.65	11.90	7.33
30-day Commercial Paper	7.25	7.35	7.60	11.38	6.95
90-day Commercial Paper	7.30	7.30	7.63	11.40	7.00

U.S. BOND PRICES AND YIELDS (%)

	Last Friday	Change on week	Yield	1 week ago	4 wks ago
Seven-year Treasury	107	− 1¾	10.27	9.96	10.40
20-year Treasury	110¼	− 2½	10.73	10.44	10.96
30-year Treasury	108¼	− 1⅞	10.57	10.27	10.84
New 10-year "A" Financial	N/A	− 1½	11.00	10.75	11.25
New "AA" Long utility	N/A	− 3¼	11.63	11.28	11.63
New "AA" Long industrial	N/A	− 3¼	11.50	11.13	11.50

Source: Salomon Bros (estimates).

Money Supply: In the week ended June 10 M1 rose by $4.8bn to $590.5bn.



UK GILTS

Institutions caught out by Fed-watching

FED-WATCHING becomes an ever more dangerous game, particularly from this side of the Atlantic.

The apparent certainty early last week of a cut in the U.S. discount rate persuaded many British institutions that it was time to join the foreign buyers who have been locking into high gilt-edged yields since April.

As U.S. interest rates fell and the pound climbed to over $1.30 there were renewed murmurings of an early fall in base rates. Amid the optimism the Bank of England managed its first sales of the £800m *Treasury 10 per cent 2004* tap stocks.

Brokers estimated that £300 to £400m of the partly-paid issue was sold, with the authorities supplying it first at £30½ and then at £30¾.

The demand, however, vanished as quickly as it had appeared. Thursday's flash forecast of second quarter U.S. growth and the sharp rise in U.S. MI money supply growth, announced the same day, saw the dollar reverse its earlier losses within hours.

Investors who had paid £30¾ for the tap stock found themselves sitting on a ½ point loss. The gainers were the Bank, which managed a useful tranche of funding ahead of today's £1.2bn British Telecom call, and the taxpayer.

Hopes of a discount rate cut have not evaporated, however. Many brokers are still predicting such a move, mainly because the Fed feels uncomfortable with the dollar's present strength.

And with UK yields still among the best around, the consensus was that even if U.S. rates are now close to their *floor, the international environment* should continue to favour sterling instruments.

Britain's relatively high inflation rate and the uncertainties surrounding the oil price have so far been comfortably absorbed by the yield differential between London and other markets.

The other lesson from last week is the extent to which the gilt-edged market has become fixated with the dollar-sterling rate.

Once the pound moves above $1.30 there is immediate speculation about a base rate cut and a corresponding rise in gilt prices. A fall below $1.30 brings a parallel drop in the gilt-edged market.

The linkage itself is nothing new, but the focus has not been as sharp for some time.

Given the current volatility of the exchange rate — and the possibility of storms in the run-up to the Organisation of Petroleum Exporting Countries meeting—there are few willing to forecast the short-term outlook. Many fund managers appear content to sit tight until the trend is clearer.

But on a longer term perspective, the general view is that sterling rather than the dollar will be the beneficiary of the next significant shift in their respective values.

Although gilt-edged investors have been content to shadow the pound, many brokers still appear uneasy with the domestic background.

For the past month or so they have concentrated on the above-target growth of sterling M3, but last week the emphasis shifted to fiscal policy with a spate of circulars suggesting the possibility of another overshoot in public borrowing.

At the time of the Budget the Government's arithmetic could not have looked sounder, with a £5bn contingency reserve available to cushion the Treasury against the usual spending overruns.

But the impact on oil revenues of sterling's recovery, the follow-on costs of the miners' strike, and significant overshoots in both central and local government borrowing have eroded the market's confidence.

Brokers Phillips & Drew and *W. Greenwell are both forecasting* a public sector borrowing requirement in 1985-86 closer to £8bn than to the official £7.2bn target.

Given that in recent years the PSBR has generally been more than £10bn, that forecast is unlikely to cause undue alarm. The renewed concern does signal, however, that the authorities cannot take it for granted that as long as sterling is strong the gilt-edged market will take everything else for granted.

Philip Stephens

FT/AIBD INTERNATIONAL BOND SERVICE

U.S. DOLLAR STRAIGHTS

U.S. DOLLAR STRAIGHTS	Issued	Price	Chg. on week	Yield
AHFC O/S Fin 11¾ 94	100	106	+0¼	10.62
AIDC 11 89	75	103¼	+0½	9.89
AIDC 11⅞ 90	100	101¾	−1¼	11.48
Amer Savings 12 89	125	103¼	+1½	10.87
Amer Savings 12½ 89	100	102⅞	−0½	11.28
Asian Dev Bk 11¾ 93	100	106½	+0¼	10.52
Australia 11¾ 90	100	105¾	−0⅛	[illegible]
Australia 11½ 95	300	106⅜	+0¼	[illegible]
Australia 11¾ 98	100	108⅝	+0¼	[illegible]
Austria 15½ 88	75	113	+0¼	[illegible]
Avco Fin 13¾ 91	100	108	+3½	[illegible]
Bk Nova Scotia 13⅛ 87	100	106⅛	0	[illegible]
Bank of Tokyo 12⅞ 92	100	105	0	[illegible]
Bank of Tokyo 13⅝ 91	100	112¼	−0¼	[illegible]
Bank of Tokyo 13⅞ 89	100	111⅛	−0¼	[illegible]
Bergen Bank 11½ 90	75	100⅜	+0¼	[illegible]
BP Capital 11¼ 92	150	102⅞	−0⅛	[illegible]
Br Col Hydro 11¾ 93	200	107⅛	0	[illegible]
Br Col Hydro 12½ 14	200	111½	−0¼	[illegible]
Br Col Hydro 12⅝ 13	250	111¾	+0¼	[illegible]
Britoil Fin 11⅞ 90	125	104⅛	+0⅛	[illegible]

	Issued	Price	Chg. on week	Yield
Saskatchewan 10¼ 92	100	101½	+0¼	10.40
Saskatchewan 10¼ 90	125	102⅞	−0⅛	9.93
Saskatchewan 11⅞ 89	100	105⅝	+0¼	10.18
Saskatchewan 15 92	150	120¼	−0⅛	10.75
Saskatchewan 16 89	125	117¼	+0¼	10.16
Scot Int Fin 14¼ 98	50	110⅞	+0¼	12.40
Sears O/S Fin 0 98	500	25½	−0⅛	11.16
Sears Roebuck 10½ 91	150	100⅝	−0¼	10.35

	Issued	Price	Chg. on week	Yield
Murata Mfg 3½ 00	100	90¾	−8¼	7.88
Nippon Oil 3¼ 99	50	90¾	+2	1.35
Ono Pharm 3¼ 98	60	81	−12	18.69
Soc Gen Surv 4½ 94	51	102¾	−0¼	147.36
Sumitomo Corp 2⅞ 99	70	122⅞	+1¾	2.19
Texaco Capital 11¾ 94	1bn	105¼	−1	38.94
Texaco Capital 11¾ 94	500	109½	−0⅝	40.59
Tsugami Corp 3⅛ 00	20	75	−7	−67.17
Yamaichi Sec 3½ 95	20	136⅝	+11	−3.26

STRAIGHT BONDS: Yield to redemption of the mid-price. Amount issued is expressed in millions of currency units except for yen bonds, where it is in billions.

FLOATING RATE NOTES: U.S. dollars unless indicated. Margin above six-month offered rate (‡ three-month: § above mean rate) for U.S. dollars. C.cpn=current coupon.

CONVERTIBLE BONDS: U.S. dollars unless indicated. Prem=percentage premium of the current effective price of buying shares via the bond over the most recent share price.

WARRANTS: Equity warrant prem=exercise premium over current share price. Bond warrant ex yld=exercise yield *at current warrant price.*

* Perpetual.

Closing prices on June 21.

These Bonds having been sold outside the United States of America this announcement appears as a matter of record only

New Issue

May 1985

AMI

AMERICAN MEDICAL INTERNATIONAL, INC.
Beverly Hills, California, USA

U.S.$ 75 000 000

Bonds of 1985 due 1997
Interest payable annually in Swiss Francs at the rate of Sfr. 250.– per Bond on the aggregate subscription price of 30 000 Bonds

Swiss Francs 115 380 000

SODITIC S.A.

GOLDMAN SACHS FINANZ AG

BANK HEUSSER & CIE AG
CHEMICAL BANK (SUISSE)
ROTHSCHILD BANK AG
BANQUE PARIBAS (SUISSE) S.A.
MANUFACTURERS HANOVER (SUISSE) S.A.

Amro Bank und Finanz
Kredietbank (Suisse) S.A.
J. Henry Schroder Bank AG

Banco Exterior (Suiza) S.A.
Banque Kleinwort Benson SA
Compagnie de Banque et d'Investissements, CBI
Handelsfinanz Midland Bank
Migros Bank
Nordfinanz-Bank Zürich
Sanwa Finanz (Schweiz) AG
Sumitomo International Finance AG
Bank für Kredit und Aussenhandel AG
Banque Pasche S.A.
Daiwa (Switzerland) S.A.
Hottinger & Cie
Mitsui Finanz (Schweiz) AG
Overland Trust Banca
Security Pacific Bank S.A.

These Bonds having been sold outside Australia, this announcement appears as a matter of record only.

New Issue

May 1985

BOND

BCF (BOND CORPORATION FINANCE) LIMITED
Perth, Western Australia

Swiss Francs 125 000 000
6¼% Bonds 1985-1995

with the guarantee of

BOND CORPORATION HOLDINGS LIMITED
Perth, Western Australia

SODITIC S.A.

BANK HEUSSER & CIE AG
BAÑQUE GUTZWILLER, KURZ, BUNGENER S.A.
GREAT PACIFIC CAPITAL S.A.
NIPPON KANGYO KAKUMARU (SUISSE) S.A.

Manufacturers Hanover (Suisse) S.A.
Overland Trust Banca

Amro Bank und Finanz
Banco Exterior (Suiza) S.A.
Bank Künzler AG
Banque Indosuez, Succursales de Suisse
Banque de Participations et de Placements S.A.
Banque Scandinave en Suisse
BHF Bank (Schweiz) AG
Crédit des Bergues
Daiwa (Switzerland) S.A.
Grindlays Bank Plc
The Industrial Bank of Japan (Schweiz) AG
J. Henry Schroder Bank AG
New Japan Securities (Schweiz) AG
Société Générale Alsacienne de Banque
– Groupe Société Générale –
Banca Unione di Credito
Bank für Kredit und Aussenhandel AG
Bank Leumi le-Israël (Schweiz)
Banque Nationale de Paris (Suisse) S.A.
Banque Pasche S.A.
Barclays Bank (Suisse) S.A.
Compagnie de Banque et d'Investissements, CBI
Dai-Ichi Kangyo Bank (Schweiz) AG
First Chicago S.A.
Hottinger & Cie
Inter Maritime Bank
LTCB (Schweiz) AG
Samuel Montagu (Suisse) S.A.
Sumitomo Trust Finance (Switzerland) Ltd.
Volksbank Willisau AG

These Bonds having been sold outside the United States of America, this announcement appears as a matter of record only.

New Issue

June 1985

COLECO

COLECO INDUSTRIES, INC.
West Hartford, Connecticut, USA

U.S.$ 44 480 000

Subordinated Bonds 1985-1993
Convertible into the Common Stock of

COLECO INDUSTRIES, INC.

Interest payable in Swiss Francs at the rate of 6½% p.a. on the aggregate subscription price of

Swiss Francs 80 000 000

SODITIC S.A.

BANK HEUSSER & CIE AG
MERRILL LYNCH BANK (SUISSE) S.A.

Bankers Trust AG
Kredietbank (Suisse) S.A.
Compagnie de Banque et d'Investissements, CBI
LTCB (Schweiz)AG

Amro Bank und Finanz
Banque Kleinwort Benson SA
Banque Pasche S.A.
Dai-Ichi Kangyo Bank (Schweiz)AG
Grindlays Bank PLC
Nomura (Switzerland) Ltd.
Bank Oppenheim Pierson (Schweiz) AG
Banque Paribas (Suisse) S.A.
Chemical Bank (Suisse)
Daiwa (Switzerland) S.A.
Nippon Kangyo Kakumaru (Suisse) S.A.
J. Henry Schroder Bank AG

This announcement appears as a matter of record only

US$ 38,640,000.–

AGREEMENT TO PURCHASE BILLS OF EXCHANGE MATURING THROUGH 1994

issued by

SAIPEM S.p.A.
Milan

accepted by

PETROLEUM PIPELINES COMPANY
Cairo

bearing the aval of

NATIONAL BANK OF EGYPT
Cairo

arranged by

SODITIC (JERSEY) LIMITED

Managers

BANCO DI NAPOLI INTERNATIONAL S.A.
CANADIAN IMPERIAL BANK GROUP
CREDITANSTALT-BANKVEREIN
INTERNATIONAL ENERGY BANK LIMITED – SFE GROUP
MANUFACTURERS HANOVER BANK (GUERNSEY) LTD.
SANPAOLO-LARIANO BANK S.A.
GENERALE BANK
BANQUE PARIBAS (LONDON)
AMSTERDAM-ROTTERDAM BANK N.V.

Italian Agent Bank

BANCO DI NAPOLI
Milan Branch

Agent

SODITIC S.A.

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INTERNATIONAL CAPITAL MARKETS AND COMPANIES

Shell Oil to buy Arco petrol stations

By Our Financial Staff

SHELL Oil, part of the Royal Dutch/Shell group, has signed a letter of intent to buy more than 400 U.S. petrol stations from Atlantic Richfield, the U.S. oil company which is undergoing a big restructuring.

The stations are located in Connecticut, Delaware, Maryland, Massachusetts, New Hampshire, New Jersey, Rhode Island, Virginia and the District of Columbia.

The deal is the first major step by Arco since it announced earlier this year a restructuring programme involving plant closures, the buyback of shares and withdrawal from marketing in the north-east of the U.S.

Terms of the deal were not disclosed, raising speculation in Wall Street that the price was more in favour of Shell Oil than Arco.

● Mr Ted Turner, the Atlanta media magnate, has surmounted the first regulatory hurdle in his junk-bond financed bid for CBS with the approval by the U.S. Securities and Exchange Commission of his registration statement in connection with the offer.

Mr Turner's company, Turner Broadcasting System, said it would start mailing shortly a prospectus to CBS shareholders on the $4.5bn offer. Mr Turner said TBS looked forward to letting shareholders of CBS "determine the future course of their company."

Borregaard marks time

By Fay Gjester in Oslo

BORREGAARD, the Norwegian industrial group with interests in forest products, chemicals, toiletries, foodstuffs and metals, reports stagnant profits for the first four months of 1985, compared with a year earlier, despite increased turnover as a result of acquisitions.

Profits before extraordinary items were NKr 41.4m ($4.7m), against NKr 39m but the sale of a 50 per cent stake in a jointly-owned chlorine plant pushed profits after extraordinary items to NKr 125.1m, compared with NKr 38.4m in January-April last year. Gross external sales were 14 per cent up at NKr 1.8bn.

Operating loss for Bumiputra

BY WONG SULONG IN KUALA LUMPUR

BANK BUMIPUTRA, the Malaysian bank which was saved from collapse by a massive rescue operation by Petronas, the Malaysian oil company, last September, has reported an operating loss of 105m ringgit ($43m) for the year ended December 1984.

In a statement issued after a board meeting over the weekend, Mr Tan Sri Basir Ismail, the bank's executive chairman since January, said this loss was largely due to the "carrying costs" of 1bn ringgit in problem loans before they were transferred to Petronas.

However, after taking into account extraordinary gains from the sale of its 30 per cent stake in Malayan Banking, the net after-tax profit was 480m ringgit compared with a loss of 973m ringgit for 1983.

The sale of the Malayan banking stake to Permodalan Nasional, the Malaysian Government's investment agency, formed part of the Petronas rescue plan.

Under the plan, Bank Bumiputra wrote off 1bn ringgit of the problem loans, transferred another 1bn ringgit in problem loans to Petronas and sold off the Malayan Banking stake in return for a 2.5bn ringgit cash injection from Petronas, which ended up with 90 per cent of the bank. The remaining 10 per cent is being held by the Finance Ministry.

The bad loans were given out by Bumiputra Malaysia Finance (BMF), the bank's Hong Kong subsidiary, to property companies, mainly the Carrian group and its chairman, Mr George Tan, between 1980 and 1983.

The bank did not release its 1984 annual report to the press, due to "printing errors," and it was therefore difficult to make comparisons.

But excluding the "carrying costs" of the 1bn ringgit in problem loans before they were transferred to Petronas, the bank is understood to have made between 40m and 50m ringgit in profits from its normal operations last year.

The finance subsidiary's pre-tax profit fell from 7.2m ringgit to 5.3m, that of the merchant bank increased fourfold to 7.2m ringgit and BMF itself made pre-tax profits of 16m ringgit compared with a loss of 2.5m ringgit in 1983.

For the current year, Mr Ismail said the bank is expected to earn increased profits to reduce the accumulated loss of 348m ringgit by another 25 per cent.

The bank's paid-up capital at the end of 1984 stood at 1,376m ringgit, and shareholders funds were 1,028m ringgit after taking into account the accumulated loss.

Total assets of the bank slipped by 5 per cent to 15.4bn ringgit, and in terms of assets, Malayan Banking has now overtaken Bank Bumiputra as the leading Malaysian bank with its total assets at 18.1bn.

Since Mr Ismail took over, Bank Bumiputra has undertaken a major management overhaul, with resignations from at least six senior executives.

Gencor opens KwaZulu pit

BY GEORGE MILLING-STANLEY

GENCOR, the South African mining group, has brought a coal mine in the tribal homeland of KwaZulu, northern Natal, into production just under three years after political pressure forced General Electric of the U.S. to pull out of a proposed joint venture to develop the deposit.

The GE subsidiary, Southern Sphere Holdings, was forced to withdraw in October 1982 from what would have constituted the biggest investment by a U.S. company in South Africa for many years, when the state legislature in Connecticut, where GE has its headquarters, took steps to prevent the state pension fund from investing in any company with interests in South Africa.

The decision was a bitter blow for Chief Gatsha Buthelezi, KwaZulu's Chief Minister, who has consistently opposed the disinvestment campaign sponsored by the anti-apartheid movement.

Chief Buthelezi argues that investment in South Africa should be actively encouraged on the grounds that it will provide much-needed employment and therefore access to economic power for the country's black people.

The Gencor subsidiary, Trans-Natal Coal Corporation, announced last September that it planned to go it alone in developing the deposit, albeit on a smaller scale than was envisaged in the original joint venture.

Zululand Anthracite Colliery, situated 48 kilometres north-east of the KwaZulu capital of Ulundi, has been brought into production just eight months after that decision, at a cost around R6m below the budgeted figure of R86m ($43.2m).

The mine will build up to reach full production by the end of this year, at which time annual output will be 875,000 tonnes of high-grade anthracite. Some 700,000 tonnes of this will be exported through the coal terminal at Richards Bay, close by on the Natal coast, with the remaining 175,000 tonnes being supplied to the domestic South African market.

The underground mine has sufficient reserves to support a life of 22 years,

Swiss seek market tax cuts

BY JOHN WICKS IN ZURICH

CUTS in money-market taxes and a scrapping of the sales tax on gold are called for in a motion of the States Council, Switzerland's upper house. Similar demands have been made in the past year in the lower house and by banking circles.

A group of 19 of the council's 46 parliamentarians claims that Switzerland as a financial centre faces a growing fiscal disadvantage, when other countries are making considerable efforts to strengthen their position.

According to the motion's initiator, Mr Paul Buergi, a Radical Democrat, councillor, this could have a negative effect on the number of jobs in the Swiss service sector, as well as on income from direct and indirect taxation.

The motion calls for a scrapping of stamp duty on money-market paper of three months' maturity or less. In the case of maturities between three and 12 months, the proposal is for a gradation of the duty.

At the same time, it is suggested that the fiscal burden on the Swiss underwriting of Eurobonds should be abolished. On securities deals between non-Swiss clients through a Swiss broker a cut of at least half is suggested.

Elsewhere, the Buergi motion asks for a lifting of withholding tax on interest arising from interbank time deposits

Finally, the motion requests the lifting of the federal sales tax on physical gold. This was introduced in 1980 and today amounts to 6.2 per cent.

N. AMERICAN QUARTERLIES

HUMANA
Hospital operator

Third quarter	1984-85 $	1983-84 $
Revenue	750.82m	690m
Net profits	58.06m	51.90m
Net per share	0.59	0.53
Nine months		
Revenue	2.13bn	1.95bn
Net profits	163.92m	147.91m
Net per share	1.66	1.49

HOUSTON INDUSTRIES
Diversified energy

Fourth quarter	1984-85 $	1983-84 $
Revenue	907.3m	949.6m
Net profits	77.08m	55.93m
Net per share	0.75	0.60
Year		
Revenue	4.18bn	4.12bn
Net profits	395.36m	337.47m
Net per share	4.02	3.72

NATIONAL BANK OF CANADA

Second quarter	1984-85 C$	1983-84 C$
Revenue	—	—
Net profits	35.5m	26.9m
Net per share	0.82	0.66
Six months		
Revenue	—	—
Net profits	75.3m	53.5m
Net per share	1.75	1.41

JIM WALTER
Builder and building materials

Third quarter	1984-85 $	1983-84 $
Revenue	579.3m	591.8m
Net profits	31.2m	29.4m
Net per share	1.43	1.35
Nine months		
Revenue	1.66bn	1.63bn
Net profits	73.2m	63.28m
Net per share	3.36	2.90

NEW INTERNATIONAL BOND ISSUES

Borrowers	Amount m.	Maturity	Av. life years	Coupon %	Price	Lead Manager	Offer yield %
U.S. DOLLARS							
Sandoz Holdings §‡	98.541	1997	12½	4¼	100	SBCI	4.250
Eurofima ‡	100	1995	10	10	100	Merrill Lynch	10.000
Federated Dept. Strs. ‡	100	1995	10	10⅛	100	Goldman Sachs	10.125
Citicorp Banking (a)†‡	250	1997	12	3/16	100	CIBL	-
KOP (b) ф †‡	100	1997	12	⅛	100	Salomon Brothers	-
Belgium (h)†‡	400	2005	20	(h)	100	Morgan Guaranty	-
BNP (b) ф †‡	250	1997	12	⅛	100	BNP	-
Swedbank (b) ф †‡	75	1997	12	⅛	100	Salomon Brothers	-
Proctor & Gamble ‡	150	1995	10	10	100	Goldman Sachs	10.000
Florida Fed. S&L ‡	160	1995	10	0	36.15	Kidder Peabody	10.710
Viacom Int. §	50	2000	15	(7–7½)	100	CSFB	*
Bk Gemeinwirtschaft (e) ф †‡	100	1992	7	⅛	100	Samuel Montagu	-
Long-Term Credit Bk ‡	150	1995	10	10⅛	100¾	LTCB Int.	10.884
Allied Irish (g) ф †‡	100	—	—	½	100	Salomon Brothers	-
Credit Lyonnais (j) ф †‡	250	1997	12	¼	100	Credit Lyonnais	-
Westpac (c) ф †‡	150	1997	12	¼	100	Morgan Stanley	-
Republic N. York (f)†‡	100	2010	25	⅛	100	Salomon Brothers	-
Prism Bond (Germany) †‡	150	1993	8	(k)	100	Merrill Lynch	-
John Labatt ‡	100	1995	10	10½	99½	Wood Gundy	10.584
Laaninstutet Skips. ‡	50	1990	5	9⅜	100	Den norske Creditbk	9.375
Kyntaru §	30	1995	10	(3½)	100	Nomura Int.	*
Mitsui Bank (j) ф †‡	150	1997	12	¼	100	Mitsui Fin. Int.	-
Tokyu Dept. Stores ¶	50	1990	5	7⅛	100	Nomura Int.	7.125
CANADIAN DOLLARS							
Hamilton-Wentworth ‡	25	1995	10	10¾	99¾	Wood Gundy	10.792
AUSTRALIAN DOLLARS							
C'wealth Bk Australia ‡	100	1990	5	12⅞	100¼	SBCI	12.804
First Austrian Bk ‡	40	1990	5	13⅛	100⅝	Orion Royal Bank	12.940
NEW ZEALAND DOLLARS							
DG Bank ‡	50	1990	5	16½	100¼	Morgan Guaranty	16.423
D-MARKS							
Posts & Tel (S.Af)‡	100	1990	5	7¾	99¾	Deutsche Bank	7.812
Posts & Tel. (S.Af)‡	100	1993	8	8	100	Deutsche Bank	8.000
IADB ‡	250	1995	10	7¼	100	Deutsche Bank	7.250
SWISS FRANCS							
PanAm Corp. §‡	100 min	1995	—	8½	100	Soditic	8.500
Sanyo Electric **¶‡	80	1990	—	3⅛	100	SBC	3.125
MK Seiko **‡	10	1990	—	5¾	100	LTCB (Schweiz)	5.750
Suzuya **‡	20	1990	—	5¾	100	IBJ (Switz)	5.750
World Bank **‡	200	1990	—	5½	100	UBS	5.500
World Bank **‡	200	1991	—	5⅝	100	SBC	5.625
World Bank **‡	250	1992	—	5¾	100	Credit Suisse	5.750
Gunze Sangyo **§	25	1990	—	1¾	*	Swiss Volksbank	*
Mitsubishi Plas. **‡	60	1990	—	5¾	100¼	SBC	5.681
Hanwa Co. **§	140	1990	—	(1⅝)	*	Banca del Gottardo	*
Japan Fin. Corp.	100	1995	—	(5½)	*	Credit Suisse	*
Kinder-Care ‡	130	1995	—	5¾	99½	Chemical Bk (Suisse)	5.817
ECUs							
Bk Mees & Hope ‡	50	1992	7	9	100½	Bk Mees & Hope	8.903
C. Itoh	60	1992	7	8¾	*	Banque Indosuez	*
Motorola Inc. ‡	50	1992	7	8⅝	98¾	UBS (Secs)	8.874
Fiat Fin. & Trade ‡	55.5	1990	4	8¾	100	Mitsubishi Fin. Int.	8.750
All Nippon Air ‡	130	1995	10	9	100½	Banque Paribas	8.922
Korea Dev. Bk. (c)†‡	50	1992	7	¼	100	Generale Bank	-
Pakhoed ¶‡	20	1995	10	7	100	Generale Bank	7.000
Union Bk Finland	15	1992	7	8¼	*	BIL	*
STERLING							
Co-Op Bank (f)†‡	75	2000	15	⅛	100	BoA Int.	-
FRENCH FRANCS							
Sweden (d)‡	500	2000	15	11	100	BNP	11.000
DANISH KRONER							
Norsk Hydro ‡	250	1992	7	11⅜	100	Copenhagen Handelsbk	11.375
GUILDERS							
Wereldhave Int. **‡	75	1990	5	7½	100	Pierson Heldring P.	7.500
YEN							
NZ Steel Dev. ‡	25bn	1995	9	6.8	99¾	Nikko Secs.	6.835

* Not yet priced. ‡ Final terms. ** Private placement. § Convertible. † Floating rate note. ¶ With equity warrants. ф Maximum coupon. ‖ Dual-currency. (a) 3/16 over Libid – at issuer's option 1, 3 or 6m. (b) ⅛ over 3m Libid. (c) ¼ over 6m Libor. (d) Retractable after 5 yrs. (e) ⅛ over 6m Libid. (f) ⅛ over 3m Libor. (g) ½ over 3m Libor. (h) Mis-match: higher of 6m Libid or 1m Libor. (j) ⅛ over 3m Libor. (k) Mis-match: higher of 6m Limean or 1m Libor. Note: Yields are calculated on AIBD basis.

INTERNATIONAL APPOINTMENTS

Dinger takes MTU lead after Zimmerman killing

BY JONATHAN CARR IN FRANKFURT

DR HANS DINGER has been appointed chief executive of Motoren-und Turbinen-Union (MTU), the West German aero-engine concern, in succession to Dr Ernst Zimmermann who was shot dead by terrorists early this year.

Dr Dinger, who was 58 on Saturday was deputy chief of MTU from 1978, and took over the acting leadership following Dr Zimmermann's death.

Following Friday's appointment by the supervisory board, he becomes head of a group with a labour force of 12,000 and a likely turnover this year of DM 2.2bn — more than one third in the military sector.

Dr Dinger, a trained engineer and an expert in propulsion technology, is taking over the company at a key moment in its history. It was recently announced that Daimler-Benz, the vehicle maker, was taking full control of MTU, which it formed on a 50-50 basis with the MAN engineering company in 1969.

Dr Dinger's links with Daimler-Benz go back a long way—as far as 1951 when he became a construction engineer at the vehicle concern's large engines plant in Stuttgart.

When MTU was formed, Dr Dinger took over the group's development division at Friedrichshafen on Lake Konstanz. Less than a decade later he was MTU deputy board chairman.

Among other products, MTU makes engines for the Tornado combat aircraft and for civil airlines, as well as diesel engines for ships and heavy vehicles. It is also expanding its activities in data processing and software.

Wasau outlook made obscure

BY TERRY BYLAND IN NEW YORK

THE RESIGNATION of Mr John A. Schoneman as chairman and chief executive officer of Wausau Insurance, the Winsconsin mutual insurance group, leaves the management outlook obscure. Mr Schoneman, who linked his resignation to Wausau's $207m loss in the 1984 fiscal year, has been temporarily succeeded by Mr Thomas Hancock, who is 71 years old. Mr Dwight Davis, corporate affairs spokesman, says that no decision had yet been taken on a permanent replacement to Mr Schoneman.

Wausau has been suffering losses on its property and casualty insurance, and also on medical malpractice policies which it ceased writing nine years ago. Other problem areas have included auto insurance and some high risk casualty sectors. Although no details have been released of current trading, Wausau expects to return to profitability by 1986.

"A broad-based recovery programme has been introduced, which we hope will be showing results by next year," says Mr Davis. The 1984 loss represented a substantial downturn for Wansau, which earned $20.6m in the previous year. Premium income has consistently run above the $1bn mark.

Mr Schoneman is believed to have offered his resignation when last year's results were first announced, but his departure appears to have been unscheduled.

No other management changes have been made, although Mr Schoneman is understood to have recommended several other moves before he left the company.

Mr Hancock has been on the Wausau board for 16 years, and is chairman of the board's executive committee.

Switch at Union Bank of Finland

By Olli V. Virtanen in Helsinki

UNION BANK OF FINLAND, one of the two major Finnish banks, has combined its international and corporate banking sectors under the same management, headed by Mr Paavo Laitinen, currently the head of UBF's international banking operations.

The reorganisation also involves the formation of two other divisions, finance operations and branch network and retail banking. The former will be headed by Mr Erik Stadigh and the latter by Mr Kurt Stenvall. All three will be deputy chief general managers, while Mr Arti Hirvonen will remain chief general manager and Mr Mika Tiivola chairman and chief executive.

UBF explains the reshuffle as being the result of growing internationalisation of its mainly Finnish corporate customers. A UBF spokesman says the bank's strategy is now geared more towards that of an international bank acting in international finance, rather than having the international operations headed in Helsinki.

The Finnish bank has expanded its international operations heavily in the past couple of years. It recently acquired the entire share capital of American Scandinavian Banking Corporation in New York. It also has wholly-owned subsidiaries in Luxembourg and Singapore. In London it is involved in two operations, having a branch of its own and a share in Scandinavian Bank, the consortium bank. UBF has also representative offices in Los Angeles, Moscow, Sao Paule, Stockholm, Tokyo and Zurich.

Bioul takes chair at Henrijean

JEAN-MARIE BIOUL, managing director of Marsh and McLennan, the New York based insurance broking concern, has been appointed chairman of Henrijean and Cie, the Marsh and McLennan offshoot which claims to be the largest insurance brokerage company in Belgium.

He succeeds Baron Philippe Snoy, who retired at the beginning of the month, as managing director of Marsh and McLennan and chairman of Henrijean.

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Ghassan Sami Nachawi has joined the BAII Banking Corporation, New York, as a senior vice president, in charge of international and correspondent banking activities.

Intercontinental Hotels gives lead to Sternik

BY ARTHUR SANDLES

MR HANS G. STERNIK, president and chief operating officer of Intercontinental Hotels, the Grand Metropolitan subsidiary, is to become chief executive officer of the corporation on October 1. He succeeds Mr Paul Sheeline, who is chairman and chief executive officer. Mr Sheeline will remain as chairman of the board and a member of the executive committee.

Mr Sternik will continue as president and will become a member of the executive committee.

Mr Sheeline, who is 63, joined Intercontinental in 1966, and became chief executive officer in 1971. Under his direction the corporation has grown from having 49 hotels that year to the present 97, while sales have risen from $136m to more than $1bn. Mr Sheeline steering Intercontinental through its purchase by Grand Met in 1981 from Pan American World Airways.

He remains a director of Pan Am and is on the board of National Westminster Bank USA.

Mr Sternik, who is 58, joined Intercontinental in 1964 as a hotel manager in Vienna. He became chief operating officer in 1972. He was elected president in 1974 and became a director in the same year.

Mr Sheeline says: "I plan to remain active in the company's affairs for the next several years, as chairman and as a consultant."

Reorganisation at Finnair

By Our Helsinki Correspondent

FINNAIR, FINLAND'S national airline, has reorganised the company's top hierarchy in an effort to ensure smooth landings to the time when the President, Mr Gunnar Korhonen retires at the end of 1986, Mr Korhonen, 67, will assume the position of the chairman of the board as of September 1. His successor will be Mr Risto Ojanon, 58, currently Finnair's marketing director and executive vice-president.

Mr Korhonen became president of Finnair in 1960.

UK COMPANY NEWS

Isotron to raise £4m with an offer by tender

BY TERRY GARRETT

MERCHANT BANK Schroder Wagg has arranged an offer for sale by tender of around a quarter of the shares in Isotron, the only independent gamma radiation service company in the UK.

The full prospectus will be published at the end of this week prior to Isotron joining the full market on July 11.

The issue will raise around £4m, of which some £3m will be new money for the company, valuing the group in the region of £15m. Carrying a high-technology label, Isotron will be launching itself on an earnings multiple in the high 'teens.

Isotron operates commercial irradiation plants which involves the exposure of products to radiation by a conveyor system carrying them around the radiation source within a shielded chamber.

Its markets fall into three broad categories — medical, biological and chemical. The main purpose of the process is to either kill bacteria for sterilisation purposes or to change the molecular structure of plastics to change their properties. For example, irradiation improves the heat resistance of insulation on wires and cables for the telecommunication and automotive industries.

The company operates from three plants in the UK — Swindon, Reading and Bradford.

The origins of the company go back to the late 1950s when two of the directors, John Grant and Frank Ley, were senior members of a research team at the United Kingdom Atomic Energy Authority's Wantage Research Laboratory. The first gamma radiation facility was commissioned at Wantage 25 years ago.

Messrs Grant and Ley set up a commercial venture in 1970 with the financial backing of LRC International. Initially the company's main activity was sterilising products for LRC.

Isotron was established late in 1983 by the venture capitalists Thompson Clive and Partners to acquire Irradiated Products from LRC and another rival company, Gamma Radiation Services, which had also been operating since 1970 with plant designed by John Grant.

Profits have grown from £249,000 in 1979-80 to £703,000 for 1983-84 on turnover which has risen from just over £1m to £2.14m. For the year ended this month, the company will be forecasting profits of around £1.1m on turnover in excess of £2.5m.

S & U Stores higher at £0.76m

PRE-TAX profits of S and U Stores increased from £725,000 to £761,000 in the year ended January 31, 1985. Turnover rose by £6.35m to £36.39m.

Mr Derek Coombs, the chairman, says that turnover expanded satisfactorily, but that profits of the group — which is primarily involved in consumer credit — were affected by non-recurring costs.

The manufacturing division was considerably reduced and will no longer be a burden on group profitability, he adds.

During the year the clothing factory in Leeds was closed and the costs were included under extraordinary items with a VAT adjustment relating to prior years.

With tax at £305,000 (£422,000) and an extraordinary debit of £219,000 (nil), attributable profits came out at £237,000, compared with £303,000. Earnings per share were up from 3.35p to 3.48p and fully diluted were 3.29p (3.35p).

Dividends on the preference share took a total of £150,000 (£8,000). Directors say that they plan to review the dividend on the ordinary shares at the end of the present year.

Talbex/Yorkgreen

Mr David Green's plans to merge the two companies of which he is chairman, Talbex and Yorkgreen Investments, ran into a snag on Friday, when Yorkgreen's independent directors reversed their recommendation of the £2m offer.

Mr Peter Neill, one of the Yorkgreen directors, said that on closer examination there was no industrial logic in the merger, and that a recovery in Yorkgreen's earnings would have a greater impact on its share price as an independent company. Yorkgreen would have a surplus on distributable reserves at the end of its current financial year, while Talbex would have a deficit, he said.

Talbex, an industrial holding company, had won a recommendation from the independent directors in May after raising its offer from £1.7m.

Stormgard

Stormgard, the shell vehicle for Mrs Jenifer d'Abo's bid for the fashion group Selincourt, had received acceptances totalling 41.3 per cent of Selincourt's equity by Friday. It reiterated that the bid would close this Friday.

Selincourt retorted, however, that it believed major institutional shareholders were still supporting it and that it was encouraged by the slow pace at which acceptances of the bid were coming in.

Dares £0.9m rights after heavy losses

A TURNROUND of some £3.12m to a loss of £1.82m for 1984 is reported by the Dares Estates group, and the directors are not recommending a final dividend. On top of that, extraordinary provisions of £3.27m have been made, mainly in respect of the former American subsidiary.

This has led to a "serious depletion" in working capital and, to finance future trading, the directors propose an underwritten rights issue to raise some £900,000 net. It will be available to ordinary holders on the basis of one newly created B share of 5p for every two existing 10p ordinary, at a price of 5p.

Fresh money is being raised through a new class of capital because the issue price is below the par value of the existing shares. The B shares will rank pari passu with the existing class.

The rights has been underwritten by Buildvale, which is controlled by certain directors, and partly sub-written by associates. If the whole of the issue is taken up by the underwriter, Buildvale and its associates will hold 33.3 per cent of Dares' enlarged capital. The Takeover Panel has confirmed that it expects to waive the requirement to make a general offer.

Group net assets have been reduced to some £3.5m, but borrowings will be cut from a peak £24m in 1984 to some £8m once currently agreed sales are completed. The directors say the group's principal bankers are "fully aware" of the position and have confirmed their continuing support.

Finance charges in 1984 shot up from £666,000 to £2.19m and this time there was an exceptional debit of £801,000. The higher finance charges were the result of the company remaining highly geared as delays in selling the San Diego property had an effect on cash flow.

Exceptional losses include a provision of £644,000 to reflect the anticipated lower prices for properties which were held long term as investments but have now been put up for immediate sale.

In the extraordinary charges, £2.7m relates to Dares Realty. This is made up of £573,000 loss on the sale of the investment, £80,000 provision for litigation fees, and £2.05m provision against promissory notes.

As with the sale of the San Diego property, the investment in Dares Realty could only be disposed of by accepting deferred interest free loan notes as part of the consideration. There are "serious doubts" as to the purchaser's ability to meet obligations on the notes due in three and seven years time, and the directors have "no alternative" but to provide in full for the discounted value of the notes.

Feedback profit shortfall

THE second-half recovery expected at Feedback, the USM quoted computer peripheral equipment manufacturer, was below expectations leaving the company with lower full-year taxable profits of £607,594 against £1.05m.

Blame for the shortfall has been pinned on a £1.3m Middle East contract, obtained last October, which could not be shipped within the financial year to March 31, 1985. This was due to a delay in the letter of credit, which was finally received in May enabling shipments to begin this month.

Turnover for 1984-85 was higher at £8.41m (£8.08m) but operating profits fell to £800,744 (£1.15m). Earnings per share were virtually halved at 3.35p (7.55p) but the total dividend is being held at 2.75p by an unchanged final payment of 1.5p.

The directors say that any forecast for the current year would be premature, although they point out that the upward trend in the level of profitable business experienced in the second half is continuing.

Dalgety move in Australia

Dalgety, the international agricultural trading group, is reducing its holding in Dalgety Farmers, an Australian farming service company, which will be deconsolidated from the group balance sheet. The move will reduce Dalgety's net borrowings by £20m or about 10 per cent.

The group previously held 65 per cent of Dalgety Farmers, and is selling a 16 per cent stake for about £5m in cash to the ANZ banking group and two Sydney investment institutions. The reduction to 49 per cent is in line with an undertaking given to the Australian government in 1983.

Charter Trust

Charter Trust & Agency had an increased net assets value of 101.6p per 25p share at May 31, 1985 compared with 91.1p six months earlier, and 81.5p at end-May 1984.

The directors of this investment trust, which has an expanding interest in special situations and unlisted investments, are paying an increased interim of 0.7875p (0.75p). They intend at least to maintain this rate of increase for the full year. Last year's final was 1.4p. Net earnings per share are shown up at 1.17p for this half, against 1.04p.

Gross revenue rose from £1.43m to £1.67m. There was a further increase in the UK equity content of the portfolio which at end-May represented 61 per cent of total assets, with corresponding reductions in the U.S. and Japan.

Tax took £487,000 (£426,000), this half leaving net revenue at £963,000 (£859,000).

Lynton drops to £1.4m

GROSS RENTAL income rose by 17 per cent to £3.96m from £3.39m for the property company Lynton Holdings in the year to the end of March 1985. Pre-tax profits, however, fell by 21 per cent from £1.81m to £1.44m.

Income from investment properties was up to £3.03m (£2.77m) but the profit from property trading fell to £293,000 (£467,000), net interest payable increased from £477,000 to £639,000 and administrative expenses rose to £965,000 (£745,000).

Although the share of profits of associated investment companies rose to £168,000 (£14,000), the share of losses of associated trading companies also rose to £446,000 (£214,000).

However, mainly as the result of a tax credit in the year of £49,000 arising from capital allowances on projects at Salford and Slough instead of a charge of £631,000 before, distributable profit was ahead by 26 per cent to £1.33m (£1.05m).

Earnings per 20p share came out at 13.19p (10.57p). A final dividend of 3.63p net makes the total payment 6.05p (5.5p).

A valuation at the year-end showed the company's properties were worth £60.38m, with a further £7.26m as share of a property in the U.S. giving a surplus of £1.63m.

Net assets per share were 409p compared with 407p at the end of the previous year.

Scott Greenham up 44%

In line with the £2m profit forecast at the time of its flotation in April. Scott Greenham has achieved a 44 per cent rise in its pre-tax result to a record £2.09m against £1.45m.

For the year to April 4 1985 turnover for this specialist lifting contractor and crane hirer improved from £11.08m to £13.15m. As expressed in the prospectus there will be no dividend for the period.

The directors say that since the financial year end the group's performance has met expectations and they are satisfied with the progress made to date. There has been further investment in the routine replacement of plant in order to meet the changing demands of the market.

The net proceeds of the new shares issued as part of the offer for sale largely remain on deposit. However, they say that development opportunities are being researched and evaluated, and further investment will be made as and when the right situations are identified. Overall they are confident of the group's prospects and look forward to another successful year.

Tax amounted to £735,000 (£683,000) to leave net profits at £1.35m (£769,000). Retained profits emerged at £1.35m (deficit £1.86m) after an extraordinary £2.62m debit last time relating to deferred tax.

Net earnings per 10p share are shown as 8.45p (4.81p) based on the shares in issue prior to the flotation.

JOHN PERKINS MEATS, a recent addition to the USM, made higher taxable profits of £363,000 (£328,000) in the half-year to March 30, 1985, on turnover up from £8.19m to £9.3m. Earnings per share were 2.38p (2.16p) and as expected there is no interim dividend.

COMPANY NEWS IN BRIEF

GRAINGER TRUST, property company, raised pre-tax profits from £766,000 to £842,000 in the six months to end March, 1985. Turnover was £2.84m (£2.18m), while interest costs were substantially higher at £1.05m (£0.62m). The interim dividend is 1.5p (1.25p) net and a total of not less than 6.25p is forecast. Earnings per share were 10.7p (9.1p).

FRENCH CONNECTION Group has agreed to purchase the goodwill, stock and trade marks of Bukta from the receiver. Consideration is some £0.7m in cash, the final amount being determined by reference to a stock-take which is due to be completed by July 19, 1985. A payment on account of £675,000 has been made.

F.H. LLOYD has sold its mineral crusher manufacturing subsidiary Brown Lenox for £328,000 and will also receive repayment of loans of some £4.2m. The £4.7m total proceeds will be used initially to reduce borrowings and, in time, provide funds for further development. The consideration is approximately equivalent to book value.

BARLOWS, engaged in packing and warehousing, incurred a pre-tax loss in 1984 of £5,948, against a profit of £43,310, on turnover down by £88,000 to £449,546. The single final dividend, however, is being maintained at 7.5p, despite losses per £1 share of 1p (earnings 9.9p).

BRUNNER Investment Trust had a higher net asset value per 25p share of 95.9p at the end of six months to May 31 1985 compared with 78.3p a year previous. The interim dividend is 1p (0.9p) with earnings per share at 1.13p (0.89p). Gross revenue for the period totalled £1.5m (1.46m).

TURNBULL SCOTT Holdings, ship owner and engineer, returned lower taxable profits of £135,000, against £274,000, for the year to end-March 1985. Turnover was down from £16.14m to £15.22m. The final dividend, however, is being increased to 6p which lifts the total net payout by 1p to 9p.

CLYDE BLOWERS, manufacturer of steam and soot blowing equipment, incurred lower first-half taxable losses of £54,905, down from £89,990. Turnover was lower at £1.52m, compared with £1.86m. The interim dividend is being held at 0.827p. The loss per share was 5.5p (9p).

BOARD MEETINGS

TODAY

Interims: Carroll Industries, Nash Industries.

Finals: Barton Group, Brown and Tawse, James Cropper, Fashion and General Investment, Health Care Services, Lawrie, Old Court Currency Fund, Racal Electronics, Stonehill, Thermal Scientific, Volex.

FUTURE DATES

Interims—

British Kidney Patient Association Investment Trust	July 16
Sandvik Aktiebolag	Aug 23

Finals—

Estates and Agency	June 28
Hogg Robinson	June 26
Monk (A.)	July 11
Optometrics (U.S.A.)	June 25
Priest (Benjamin)	July 2
Rothmans International	July 11
Scottish and Newcastle Brews.	July 1

FINANCIAL TIMES STOCK INDICES

	June 21	June 20	June 19	June 18	June 17	June 14	1985 High	1985 Low	Since Compilation High	Since Compilation Low
Government Secs.	81.96	81.94	82.17	81.86	81.73	81.66	82.17	78.02	127.4	40.0
Fixed Interest	86.72	86.49	86.45	86.25	86.19	86.12	86.72	82.17	150.4	50.0
Ordinary	963.2	974.1	982.9	985.8	988.3	979.1	1024.5	928.7	1024.5	40.0
Gold Mines	440.6	452.3	452.3	436.8	431.6	436.8	636.9	421.9	734.7	43.4
FT-Act All-Share	611.44	617.59	621.05	621.21	620.53	616.44	644.21	581.88	644.21	61.2
FT-SE100	1262.0	1276.3	1284.1	1284.0	1284.4	1275.5	1324.4	1206.1	1342.4	986.9

RECENT ISSUES

EQUITIES

Issue price p	Amount paid up	Latest Renunc. date	1985 High	1985 Low	Stock	Closing price p	+or −	Net Div.	Times covered	Gross Yield	P/E Ratio
§93	F.P.	28/6	106	102	✣Abbeycrest 10p	102	−2	42.5	2.5	3.8	14.2
180	F.P.	—	235	227	Abbey Life 5p	227	−5	b5.6	—	4.2	—
172	F.P.	28/6	190	176	Asda Property 20p	178	+2	u3.0	2.1	2.4	28.2
130	F.P.	24/7	134	125	Brent Walker 10p	126	+1	b2.5	2.6	4.0	11.0
375	200	10/9	258	175	British Aerospace 50p	175	−8	13.65	2.1	5.6	8.8
§78	F.P.	5/6	91	80	✣Browns (C.) Car 10p	91	+2	bg2.5	3.4	3.9	10.4
§165	F.P.	31/5	175	163	✣Clayform Props. 5p	165	......	bg7.5	2.1	6.6	10.3
**	F.P.	12/7	12	11	Clive Discount Wrts.	11	......	—	—	—	—
138	F.P.	21/6	135	111	Coloroll 10p	111	−1	bg4.6	2.5	5.9	9.9
§70	F.P.	—	80	74½	✣Cranbrook Elect. 5p	80	......	b1.5	3.1	2.7	15.4
§94	F.P.	21/6	105	95	✣Datron Int'l. 5p	95	......	u1.0	5.2	1.5	11.2
‖‖	F.P.	—	460	440	✣Heavitree Brewery	440	−20	10.75	1.9	3.5	21.1
‖‖	F.P.	—	450	430	Do. 'A' Lim. Vtg. Ord.	430	−20	10.75	1.9	3.6	20.8
§300	F.P.	28/6	445	370	✣Holmes & March. 10p	380	......	u5.5	4.1	1.3	22.8
140	F.P.	12/7	156	138	ISL 10p	138	−4	g1.2	5.3	1.2	16.6
§120	F.P.	7/6	189	145	✣Moorgate Group 5p	179	−1	bg2.0	5.2	1.6	14.4
50	F.P.	26/7	50½	50	Nordic Inv. Trust 10p	50	......	—	—	—	—
41	F.P.	9/7	47½	40	✣Perkins (J.) Meats 10p	40	......	b.g1.5	2.0	6.4	10.5
§138	F.P.	—	142	140	✣Prontaprint 10p	140	−2	b1.8	3.1	1.8	21.1
§175	F.P.	7/6	225	175	✣Sherwood Com 10p	175	......	62.75	3.4	2.2	18.5
‖	F.P.	12/7	425	360	Sturge Hldgs 20p	360	......	b6.0	2.4	2.4	23.5
§120	F.P.	26/6	125	103	✣Viewplan 5p	113	−2	u1.26	4.0	1.6	20.5
85	F.P.	12/5	115	98	✣Wold 5p	99	......	u3.3	2.7	3.5	13.8

FIXED INTEREST STOCKS

Issue price £	Amount paid up	Latest Renunc. date	1985 High	1985 Low	Stock	Closing price £	+or −
‖	Nil	26/7	7ppm	4ppm	Allebone 8¼% Cnv. Cum. Rd. Prf.	4ppm	......
‖	F.P.	2/8	180	140	Assoc. Brit. Eng. 8% Cum. Cnv. Rd. Prf.	140	......
‖	Nil	2/8	2ppm	1ppm	Caparo Inds. 8% Cnv. Cum. Prf.	1ppm	......
‖	F.P.	26/7	120	107	Cape Inds. 6.4% Cum. Cnv. Red. Pref.	120	+3
‖	Nil	—	3ppm	2ppm	✣Hunterprint 6½% Cnv. Cum. Red. Prf.	2ppm	—
‖	Nil	22/7	6pm	1pm	Kennedy Brookes 6¼% Cnv. Un. Ln. '92	1pm	......
‖	F.P.	5/7	109p	105p	Lon. & Edin. 6½% Conv. Cum. Rd. Prf.	105p	−2
90.705	£30	6/6	31½	29½	Malaysia 10¾% Ln. 2009	31½	−½
—	F.P.	—	100¾	100⅛	Nationwide Bldg. Soc. 12½% 9/6/86	100⅛	−⅛
‖	F.P.	19/7	105p	100p	Russell (A.) 5.75% Cum. Cnv. Rd. Prf.	101p	......
94.895	£30	12/7	36⅛	30	Spain (Kingdom of) 11¾% Ln 2010	35¼	−¼
‖	F.P.	26/7	105	100¼	Woolworth 8½% Cnv. Uns. Ln. 2000	105	+1

RIGHTS OFFERS

Issue price p	Amount paid up	Latest Renunc. date	1985 High	1985 Low	Stock	Closing price p	+or −
195	F.P.	16/7	216	195	Anchor Chemical	195	......
—	Nil	16/8	3pm	2pm	Ansbacher (H.)	2pm	......
Ir.0.44	Nil	—	5½pm	1½pm	‡‡Aran Energy 20p	2½pm	−1
350	F.P.	5/7	406	372	Beazer (C.H.) 70p	392	−2
10	Nil	—	2pm	1pm	✣Ecobric A £1	1½pm	+½
190	Nil	9/8	65pm	60pm	Emess Lighting	60pm	......
220	Nil	26/7	19pm	2pm	English China Clays	2pm	−1
210	Nil	—	32pm	14pm	Evered	14pm	−7
134	F.P.	11/7	160	154	✣Godwin Warren	157	......
80	F.P.	26/6	93	85	✣Grosvenor Square 10p	88	......
185	Nil	—	23pm	3pm	Hanson Trust	3pm	−3
180	Nil	—	17½pm	10pm	Sunlight Service 10p	10pm	−3½
120	F.P.	12/7	132	120	Suter 5p	120	−2
370	Nil	—	30pm	12pm	Taylor Woodrow	12pm	−5
10	F.P.	12/7	40½	27	"The Times" Veneer	36	......
150	F.P.	12/7	211	178	Tomkins (F.H.) 5p	202	−1
2	F.P.	22/7	3½	2½	Wiltaire Systems	2½	......

Renunciation date usually last day for dealing free of stamp duty. b Figures based on prospectus estimates. g Assumed dividend and yield. u Forecast dividend cover based on previous year's earnings. p Pence unless otherwise indicated. ¶ Issued by tender. ‖ Offered holders of ordinary shares as a "rights." ** Issued by way of capitalisation. §§ Reintroduced. ¶¶ Issued in connection with reorganisation merger or takeover. ‖‖ Allotment letters or fully paid. ‖‖ Introduction. ✣ Unlisted Securities Market. § Placing price. ‡‡ Dealt in under Rule 535 (3).

PENDING DIVIDENDS

† UK and Ireland are quoted in U.S. currency. Forward premiums and discounts apply to the U.S. dollar and not to the individual currency.

Dates when some of the more important company dividend statements may be expected in the next few weeks are given in the following table. The dates shown are those of last year's announcements except where the forthcoming board meetings (indicated thus*) have been officially notified. Dividends to be declared will not necessarily be at the amounts in the column headed "Announcement last year."

	Date	Announcement last year		Date	Announcement last year
*Assoc Newspapers	July 9	Interim 4.8	*Johnson Matthey	July 12	Final 7.0
*BPB Inds	June 26	Final 4.2	*Lex Service	July 25	Interim 4.1
BET	July 19	Final 9.75	London and Midland Ind.	July 10	Final 4.5
Brixoil	July 27	Interim 3.3	Magnet and Southerns	July 12	Final 2.7
Brown (J.)	July 24	Final nil	Midland Bank	July 26	Interim 11
Burnett and Hallamshire	June 22	Final 4.75	*NatWest	July 30	Interim 12.0
*Cable and Wireless	June 26	Final 4.1	Nottingham Mfg.	July 23	Interim 1.45
*Charter Cns.	July 17	Final 7.25	*Racal Electronics	June 24	Final 2.16
Daejan	July 11	Final 9.625	Rank Organisation	July 12	Interim 4.8
*Daily Mail & Gen Tst	July 9	Interim 12.0	Ratners	July 12	Final 1.63
Davy Corpn	July 19	Final 2.585	*Rothmans Intl.	July 11	Final 4.0
Dee Corpn	July 25	Final 3	*SGB	July 2	Interim 2.3
Distillers	July 19	Final 9.15	*Scottish and Nwcastle Brws	July 1	Final 3.64
Dixons	July 19	Final 3.4	Thorn EMI	July 12	Final 12.5
Dowty	July 19	Final 2.8	*Trusthouse Forte	June 27	Interim 1.425
*Ferranti	June 26	Final 4.4	*Union Discount	July 17	Interim due
Gestetner	July 19	Interim 0.5	Vantona Viyella	July 3	Interim 4.0
Great Univ Stores	July 19	Final 10.5	*Wedgwood	July 3	Final 3.5
Greycoat City Off.	July 12	Final 0.8			
*Hambros	June 25	Final 42.75			
Haslemere Estates	July 12	Final 6.61			
*Hogg Robinson	June 26	Final 3.45			
ICI	July 26	Interim 12			
*Imperial Cont Gas	June 27	Final 8.5			
Imperial Gp	July 12	Interim 3.0			

* Board meeting intimated. † Rights issue since made. ‡ Tax free. § Scrip issue since made. ¶ Forecast.

SHARE STAKES

Changes in company share stakes over the past week include:—

Capital Television Facilities—Crown International Productions has acquired a further 1m shares, increasing holding to 2m shares, (20 per cent).

Aspinall Holdings—John V. Aspinall, a director, purchased 40,974 beneficial ordinary shares, increasing his interest to 15m shares (28.92 per cent).

Dewey Warren Holdings—James Nicholas Oppenheim, a director, has disposed of 200,000 ordinary (4.67 per cent) at 243p per share, and now holds 50,000 ordinary (1.17 per cent).

Dwek Group—Maurice Dwek, chairman, purchased 45,000 ordinary shares, increasing total holding to 3,106,534.

C. H. Beazer—B. C. Beazer, a director, sold 300,000 shares.

F. H. Tomkins—G. F. Hutchings has an interest in 2,340,535 ordinary shares. Simon and Coates and County Bank no longer have a notifiable interest.

Hawley Group—Chase Nominees is the registered holder of 11,453,067 ordinary shares (5.9 per cent).

Jackson Exploration—Melvin W. Jackson Jr, purchased 100,000 shares, increasing holding to 54,070,000.

Brent Walker Holdings—Kuwait Investment Office is beneficial owner of 3.19m ordinary shares (12.3 per cent).

F.T. Share Information

The following securities have been added to the Share Information Service:—

African Development Bank 11¼pc Ln 2010 (Section: Intl. Bank and Overseas Government Sterling Issues).

Electron House (Electricals).

Huntleigh Technology (Industrials).

Prestwick Hldgs. (Electricals).

Rauma-Repola Oy (Industrials).

Sims Catering Butchers (Foods, Groceries).

APPOINTMENTS

Legal and General management changes

LEGAL AND GENERAL GROUP has made the following top management changes:

Following the retirement of Mr E. Wynn Owen in September, Mr Peter W. Simon will become deputy group chief executive in addition to his responsibilities as general manager (investment).

Mr John K. Elbourne, currently general manager (international), becomes a member of the group board from July 1 and will take additional responsibility for group marketing and planning. Mr Alan R. Bland, head of group planning, and Mr John B. Craddock, marketing director, with their departments, will transfer to him. As a consequence, Mr Elbourne's title will be general manager (international) and general manager (group marketing) and Mr Craddock's will be head of group marketing.

From July 1, Mr Christopher J. Hairs will be appointed society actuary. As a consequence, Mr Stewart Lyon's title will be changed to general manager (finance) and group chief actuary.

★

CALA HOMES (LOTHIAN) has made two board changes: Mr Allen Crewe, managing director since 1981, is leaving to become managing director of Cala Finance based at East Molesey in Surrey. The appointment is part of a move by the parent company, Cala (The City of Aberdeen Land Association) to expand Cala Finance activities by introducing banking contacts to small builders and developers. His place as managing director of Cala Homes (Lothian) will be taken by Mr Stephen Resler, who has held a number of senior positions within the Cala group for the past five years, and is based in Edinburgh.

★

Mr A. J. Bell, managing director, steel tube division, has joined the main board of the SENIOR ENGINEERING GROUP.

★

HOLIDAY INNS INC. has appointed Mr Wolf Vierich as director of projects-Europe. He is responsible for supervision of works and construction of all new Holiday Inn hotels and refurbishment in Europe.

★

Mr Alec Shaw has returned to the HOGG ROBINSON GROUP after a gap of 28 years to become managing director of Hogg Robinson (UK) and a director of Hogg Robinson London. Mr Shaw was previously chairman and chief executive of Reed Stenhouse UK where he had been a board member for 14 years. He had also been responsible for Reed Stenhouse operations in Italy, the Middle East and Africa. He left the Hogg Robinson Group in 1956 when he worked for The Credit Insurance Association.

★

The general manager of PECKHAM BUILDING SOCIETY, Mr Nigel J. Guest, will be appointed to the board from July 1. He joined the Peckham as general manager in June 1983 from the Country Building Society, which he had set up to provide building society facilities for the Country Gentlemen's Association.

★

Mr Bruce McCormish, commercial director of UNILEVER'S international specialities division, is to join Van den Berghs and Jurgens as commercial director. He will take the place of Mr Jan Zeeuw, who is moving to a senior commercial appointment with Unilever in London.

CONTRACTS

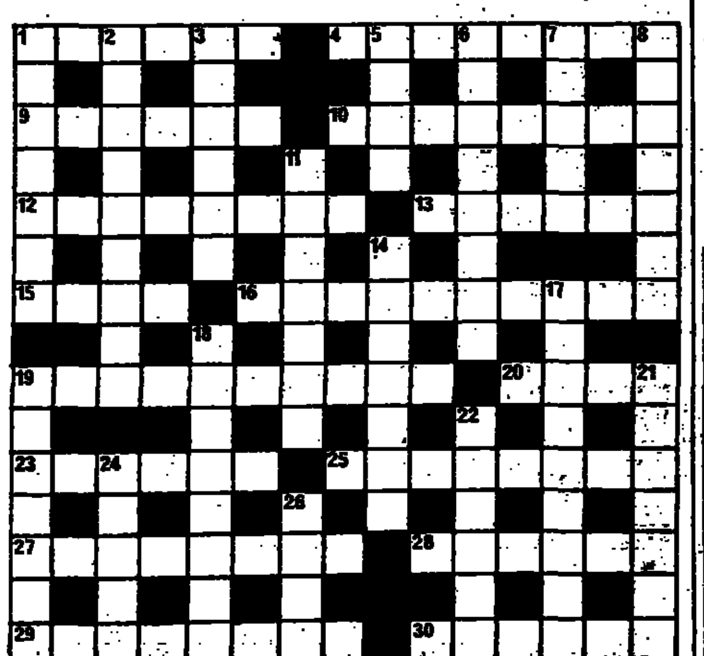
Stanton pipes for Cyprus

STANTON AND STAVELEY has won part of a major water supply contract in Cyprus. The company is to supply more than 3,000 ductile iron pipes for an order worth £4m — with the possibility of more to come. The contract from the Cyprus Government is to supply pipes for the Southern Conveyor system. It has been designed to help boost the island's economy both industrially and for tourism. The Stanton pipes will carry about 70m cu metres of water a year from the Kouris Dam, which is being built to collect water from the central Troodos mountains, to the southern part of the island. About half will be used for crop irrigation and the rest will feed the industrial and tourist areas. The overall contract was won against strong international competition including several steel tube companies, with Pont-a-Mousson — Stanton's new joint company — leading the Anglo-French effort to ultimate success.

★

BALFOUR BEATTY will carry out next month's construction work to the northbound carriageway of M1 near junction 8, at a tender price of £1.15m. The total contract lasts six weeks with severe traffic delays expected between July 2 and July 16. During the first two weeks of the contract the contractor will start preliminary signposting and coning and in the final fortnight, night-time closures of the northbound carriageway will be necessary for resurfacing north of junction 8. Significant delays are unlikely during both these periods.

F.T. CROSSWORD PUZZLE No. 5,751



ACROSS

1 Father's arbitrating body for a noisy quarrel (6)
4 Mr T—can he with changes make a businessman? (8)
9 Marched back, heartlessly, to banish (6)
10 Firm to stand endless growth (8)
12 Racket haters might use them (8)
13 Describes a clock associated with spring (6)
15 Continue support (4)
16 Street queue sat out, having formal dignity (10)
19 Comprehend where structure's foundations are (10)
20 Opera Joe? (4)
23 It's scandal if many became violent (6)
25 Carp or beef? (8)
27 One drink in examination is unusual (8)
28 A Rolls-Royce I have to get there (6)
29 It's used to contain the strikers (8)
30 Panel reform initially tried in orbit (6)

DOWN

1 Restless folk sifted about round top of garden (7)
2 Current measure almost on sea-shore (and characteristically) (9)
3 Lily's head replaced by song in jaunty manner (6)
5 Consumes some meat sandwiches (4)
6 Plotted and unravelled dull code (8)
7 A dearth signifies regret (5)
8 Old valve—rotted one finally, perhaps? (7)
11 Stir up a U.S. soldier by gallery (7)
14 Loud-mouthed Greek (7)
17 What someone said—"Get it before work starts" (9)
18 Piece of meat seen in angle that's dated (8)
19 Even a kind of dress (7)
21 Spicy information in boat (7)
22 Rails twist round front of platform, winding (6)
24 Strong fibre—hard stuff (5)
26 Seen when one's light-headed? (4)

The solution to last Saturday's prize puzzle will be published with names of winners next Saturday.

BUSINESSMAN'S DIARY

UK TRADE FAIRS AND EXHIBITIONS

June 24-27
Computers in Manufacturing (01-891 3426) Olympia

July 1-3
Insurance Information Exchange—exhibition and seminar (01-831 6909) City Conference Centre, EC3

July 2-4
P.C. Users Show (01-837 3699) Olympia

July 9-11
National Education, Training and Development Exhibition and Conference (01-637 2400) NEC, Birmingham

July 11-20
World Wine Fair (01-222 9341) Exhibition Centre, Bristol

July 14-18
Gift Trade Fair (0282 867153) Exhibition Centre, Harrogate

July 16-18
Drives, Motors, Controls Exhibition (0799 26699) Olympia

August 18-21
International Craft and Hobby Fair (04252 72711) Wembley Conference Centre

August 25-28
Scottish Autumn Gift Fair (0764 4204) Anderston Centre, Glasgow

August 28-30
International Software Engineering Exhibition and Conference (01-240 1871) Imperial College, London

August 29-September 1
International Home/Show Video and Television—VIDTEL (021-780 4171) NEC, Birmingham

September 1-4
International Menswear Fair—MAB (0727 63213) Earls Court

September 1-5
Autumn Gifts Fair (01-855 9201) Olympia

OVERSEAS TRADE FAIRS

Current
International Chemical Fair (01-378 7778) until June 28 Bratislava

June 26-28
Info/Hong Kong Exhibition (01-891 5051) Hong Kong

June 29-July 1
European Fishing Tackle Trade Exhibition (01-681 1242) Copenhagen

July 15-20
Total Energy Exhibition (01-968 4567) Guangzhou

July 17-25
International Cultivation, Harvesting and Packaging in Viticulture, Horticulture and Veg Growing Exhibition (0869 252131) Kishinev

August 16-18
International Men's Fashion Week and International Jeans Fair (01-930 7251) Cologne

August 25-30
International Heating, Ventilating & Air Conditioning Congress and Exhibition — CLIMA 2000 (Denmark 45 01 63 32300) Copenhagen

August 27-29
Finnish Fashion Fair (01-486 1951) Helsinki

August 30-September 8
International Audio and Video Fair (01-749 3061) Berlin

September 1-7
International Autumn Fair (01-493 3111) Leipzig

BUSINESS CONFERENCES

June 24-25
CommEd: Telecommunications—the European Future (01-733 3456) Dorchester Hotel, W1

June 26
Financial and Business Exhibitions: Strategies for innovation (01-493 0000) Tara Hotel, W8

June 28
The Institute for Fiscal Studies: Corporation tax (01-636 3784) St. Ermins Hotel, SW1
ESC: The Business Expansion Scheme—what the professional should know (0572 822711) Inn on the Park, W1

July 1
The Institute for Fiscal Studies: The implications of the Fowler review of the social security system (01-636 3784) Regent Palace Hotel, W1

July 1-2
Teesside and District Chamber of Commerce: Management of trade in industry (0642 240417) Golden Eagle Hotel, Thornaby, Cleveland

July 2
Royal Institute of International Affairs: European Initiatives in Information Technology (01-930 2233) Chatham House

July 3
London Chamber of Commerce and Industry: "Venezuela—an oil economy. Prospects for British suppliers" (01-248 4444) 69 Cannon Street, EC4

July 3-4
International Advertising Association (UK Chapter): Pan European Conference (01-546 4809) Grosvenor House, W1

July 4-5
Longman Seminars: Copyright—new technologies and new opportunities (01-404 4756) Barbican Centre

July 5
The Institute for Fiscal Studies: Exchange losses (01-636 3784) Park Court Hotel, W2

July 8-10
Frost and Sullivan: Development of structured software (01-486 0334) Cumberland Hotel, London

July 9
The Industrial Society: Employing casual, part-time and temporary workers—implications of recent case law (01-839 4300) London

July 9-10
FT Conference: Oil industry developments (01-621 1355) London

July 11
Commonwealth Institute: Resources of the seas and oceans: our common heritage (01-603 4535) Kensington High Street, W8

July 12
FT Conference: The City Revolution (01-621 1355) Hotel Inter Continental, W1

July 16-17
CRAC/MSC/CBI: Adult education and training: needs, courses and marketing (0223 354551) Robinson College, Cambridge

July 19
CBI: Corporate telecommunications—the realities (01-379 7400) 103 New Oxford Street, WC1

July 20
Commonwealth Institute: The Commonwealth and the Law of the Sea (01-603 4535) London

July 28-31
Kluwer Conferences: Marketing insurance (01-568 6441) Cookham, Berks

Anyone wishing to attend any of the above events is advised to telephone the organisers to ensure that there has been no change in the details published.

FT UNIT TRUST INFORMATION SERVICE

AUTHORISED UNIT TRUSTS

[illegible]

CONTINUED OVERLEAF

AUTHORISED UNIT TRUSTS & INSURANCES

Pearl Trust Managers Ltd. (a)(g)
252, High Holborn, WC1V 7EB. 01-405 8441

Pearl Growth Fd.	62.3	66.7	-0.4	3.43
Accum Units	92.2	98.1	-0.5	3.43
Pearl Inc.	86.7	92.4	-0.4	5.00
Pearl Unit Tst.	90.4	96.2	-0.5	4.14
(Accum. Units)	153.0	162.8	-0.7	4.14

Perpetual Unit Trust Mngmt. (a)
48, Hart Street, Henley on Thames. 0491 576868

Growth	181.1	194.4	+0.8	1.49
Income	135.1	144.7	-0.5	5.42
Worldwide Recovery	103.1	110.7		2.10
American Growth	56.4	60.5	+0.5	0.65
Intl. Emerging Cos.	57.9	62.2	+0.1	0.77
Far East Growth Fd	47.4	50.8	+0.5	1.00

Prolific Unit Trusts
222, Bishopsgate, EC2. 01-247 7544/7

Prolific Far East	103.6	111.0	+0.3	0.32
Prolific Extra Inc	61.3	65.2	-0.2	5.82
Prolific Gilt Cap.	79.7	82.9	-0.1	3.32
Prolific High Inc	125.6	133.6	-0.9	5.42
Prolific Intl.	84.0	90.0	+0.4	1.49
Prolific N. Amer.	116.9	125.2	+0.8	1.92
Prolific Spec. Sits	138.8	147.7	-1.3	1.68
Prolific Technology	103.6	111.0	+0.5	0.66

Providence Capital Fd. Mgrs. Ltd.
30 Uxbridge Road, London, W12 8PG. 01-749 9111

Japan Trust	49.2	52.1	+0.8	0.00
Worldwide	48.1	51.0	+0.3	1.61
European Trust	48.0	50.8	+0.3	1.69
North American	52.5	55.8	+0.7	2.05
UK Equity	49.1	52.0	-0.1	3.95

Prudential Unit Trust Mngrs Ltd. (a) (b) (c)
51-69, Ilford Hill, Ilford, Essex, IG1 2DL. 01-478 3377

Holborn Equity Tst.	312.6	332.5	-2.1	3.67
Holborn Gilt Tst.	149.5	156.4	+0.1	9.08
Holborn High Inc.	52.9	56.2	-0.1	7.49
Holborn Intl.	58.0	61.7	+0.8	0.58

TSB Unit Trusts (b) (c) (y)
PO Box 3, Keens Hse, Andover, Hants, SP10 1PG
0264 62188. Dealings to 0264 63432-3

TSB American	97.7	104.0	+1.6	1.19
Do. Accum.	100.6	107.1	+1.7	1.19
TSB Extra Income	84.8	90.3	-0.4	6.24
Do. Accum.	94.4	100.5	-0.4	6.24
TSB General	116.1	123.9	-0.5	3.41
Do. Accum.	185.1	196.5	-0.9	3.41
TSB Gilt & Fxd Int.	46.7	48.7	-0.1	9.48
Do. Accum.	56.4	58.8	-0.1	9.48
TSB Income	158.3	168.5	-0.9	5.02
Do. Accum.	238.7	254.0	-1.3	5.02
TSB Pacific	105.3	112.1	+1.2	1.05
Do. Accum.	108.0	114.9	+2.2	1.05
TSB International	228.9	243.6	+2.2	1.90
Do. Accum.	278.8	296.4	+2.6	1.90
Natural Resources	45.6	48.6	....	2.65
Do. Accum.	46.1	49.1	....	2.65
TSB Sleod. Opps.	46.7	49.7	+0.3	2.48
Do. Accum.	50.1	53.4	+0.3	2.48

3i & Target Fund Mgrs Ltd
Target House, Gatehouse Road, Aylesbury, Bucks
Aylesbury (0296) 5941

Small Co's Fund	65.7	70.3	+0.7	0.10

Target Trust Mngrs. Ltd. (a)(g)
Target Hse, Gatehse. Rd, Aylesbury Bks. (0296) 5941

American Eagle	67.2	71.9	+0.9	0.26
Australia	26.6	28.4	+0.5	0.10
Commodity	93.1	100.1		2.79
Energy	42.5	45.5	-0.1	0.77
Equity	96.7	103.1	-0.8	3.84
European Spec. Sits.	50.2	53.7		0.93
Extra Income	91.8	98.2	-0.2	7.38
Financial	199.4	212.7		2.90
Gilt Capital	213.9	224.0	-0.3	3.25
Gilt Income	101.0	105.6	-0.3	9.05
Gold Income	63.6	68.0	-0.1	2.25
Gold Acc.	114.7	122.7	-0.2	2.25
Income	56.8	61.1	-0.7	6.13
Japan	44.1	47.0	+0.2	0.10
Malaysia & Singapore	25.4	27.3	+0.5	1.09
Pacific Income	67.6	72.3	+0.9	0.86

INSURANCES

INSURANCE, OVERSEAS & MONEY FUNDS

[illegible]

OFFSHORE AND OVERSEAS

[illegible]

World Fund S.A.
2 Boulevard Royal, Luxembourg
World Fund NAV ... $21.35 — — —

World Wide Growth Management◆
10a, Boulevard Royal, Luxembourg
Worldwide Gth Fd ... $12.62 — −0.12 —
Inv. Adv.: M. & G. Inv. Mngt., Ltd., London.

Yamaichi Dynamic Mngt Co SA
10A Boulevard Royal, Luxembourg
Advanced Tech ... $8.38 — −0.13 —
Dynamic Gwth Fd ... $8.03 — −0.32 —

Money Market Trust Funds

	Gross	Net	Gr Equiv CAR	Int Cr
The Charities Deposit Fund 77 London Wall, London EC2N 1DB 01-588 1815				
Deposit	12.2	—	—	3-Mth
The Money Market Trust 63 Qn Victoria St, EC4N 4ST. 01-236 0952				
Call Fnd	12.53	9.37	13.00	Mth
7-day Fnd	12.66	9.46	13.40	Mth
Oppenheimer Money Management Ltd 66 Cannon St, EC4N 6AE. 01-236 1425				
Call Fnd	12.25	9.14	13.32	6-Mth
7-day Fund	12.31	9.20	13.55	6-Mth
Dollar	6.12	—	—	6-Mth
Money Mngt. Acct.	12.00	—	—	3-Mth

Money Market Bank Accounts

	Gross	Net	Gr Equiv CAR	Int Cr
Adam & Co. plc 22 Charlotte Sq, Edinburgh, EH2 4DF 031-225 8484				
Full Service Chr Acc	12.25	8.75	13.09	Qtr
Aitken Hume 30 City Road, EC1Y 2AY. 01-638 6070				
Treasury Acc.	12.375	9.25	13.07	Qtr
Hgh. Int. Chq.	12.25	9.16	13.90	Mth
Bank of Scotland 38 Threadneedle St, EC2P 2EH. 01-628 8060				
Cheque Acc	11.50	8.59	12.37	Mth
Barclays Prime Account PO Box 125, Northampton 0604 252891				
High Int. Cheque	12.00	8.925	13.29	Qtr
Britannia Investment Services Ltd. 29 Finsbury Circus, EC2M 5QL. 01-588 2777				
Cater Allen	12.25	9.16	13.0444	Mth
Charterhouse Japhet plc 1 Paternoster Row, EC4M 7DH. 01-248 3999				
Sterling	12.25	9.16	13.00	Mth
U.S. Dollar	7.00	7.00	7.23	Mth
German Marks	4.75	4.75	4.85	Mth
Swiss francs	1.50	1.50	1.51	Mth
Japanese Yen	5.00	5.00	5.12	Mth
Citibank Savings St Martins Hse, Hammersmith Grove 01-748 9251				
Cheque Plus	—	10.00	14.03	Qtr
Co-operative Bank Cheque & Save 78-80 Cornhill EC3 01-626 6543.				
£500-£2,499	11.0	8.22	12.11	Qtr
£2,500 +	13.00	9.72	14.40	Qtr
Dartington & Co Ltd Dartington, Totnes, Devon TQ9 6JE. 0803 862271				
Money Mkt Acc	12.25	9.16	13.00	Qtr
Edward Manson & Co Ltd 9 Henrietta Place W1M 9AG 01-631 3313				
Cheque Deposit Acc	12.75	9.53	14.49	Mth
Henderson/Bank of Scotland 38 Threadneedle St EC2P 2EH 01-628 8060				
Money Mkt. Cheque Acc	11.50	8.59	12.77	Mth
Lombard North Central PLC 17 Bruton St, W1A 3DH. 01-409 3434				
14-Day Notice	12.375	9.25	13.21	—
M & G/Kleinwort Benson 91-99 New London Rd, Chelmsford. 0245 51651				
M.I.C.A.	12.10	9.04	13.40	Daily
Midland Bank plc PO Box 2, Sheffield. 0742 20999 Ext 8730				
High Int Chq	11.77	8.80	13.17	Qtr
Provincial Trust (formerly Chamberlaine) 30 Ashley Rd, Altrincham, Cheshire 061-928 9011				
Cheque Acc	12.75	9.53	14.50	Mth
Royal Bank of Scotland plc 24 Lombard St, London EC3V 9EA 031-557 0201				
Premium Account	12.25	9.15	13.75	Qtr
Save & Prosper/Robert Fleming 28 Western Rd, Romford RM1 3LB. 0708 66966				
H.I.B.A.	12.04	9.00	13.45	Daily
Tyndall & Co 29-33 Princess Victoria St, Bristol. 0272 732241				
Demand Acc	12.37	9.25	13.00	Qtr
Money Acc	12.20	9.125	13.60	Qtr
J. Henry Schroder Wagg & Co Ltd Enterprise House, Portsmouth 0705 827733				
Special Acc	12.10	9.08	13.70	Mth
Over £10,000	12.35	9.25	14.00	Mth
Western Trust & Savings Limited The Moneycentre, Plymouth PL 15E 0752 24141				
High Int Chq Acc	12.69	9.48		

NOTES—Gross rate to those exempt from composite rate of tax. Net: actual rate after deduction of CRT. Gr Equiv CAR: Gross equivalent to basic-rate taxpayers—compounded annual rate. Int Cr: frequency interest credited.

NOTES

Prices are in pence unless otherwise indicated and those designated $ with no prefix refer to U.S. dollars. Yield % (shown in last column) allow for all buying expenses. a Offered prices include all expenses. b Today's prices. c Yield based on offer price. d Estimated. g Today's opening price. h Distribution free of UK taxes. p Periodic premium insurance plans. s Single premium insurance. x Offered price includes all expenses except agent's commission. y Offered price includes all expenses if bought through managers. z Previous day's price. ¶ Guernsey gross. # Suspended. ◆ Yield before Jersey tax. † Ex-subdivision. ‡‡ Only available to charitable bodies. ◆ Yield column shows annualised rates of NAV increase.

OPTIONS

3-month call rates

Industrials	p		p
Allied-Lyons	16	Midland Bk	38
BAT	32	NEI	8
BOC Grp	25	Nat West Bk	60
BSR	16	P & O Dfd	36
BTR	52	Plessey	17
Babcock	14	Polly Peck	26
Barclays	48	Racal Elect	18
Beecham	32	RHM	11
Blue Circle	45	Rank Org Ord	32
Boots	15	Reed Intnl	50
Bowaters	20	Sears	8
Brit Aerospace	33	TI	28
Brit. Telecom	11	Tesco	20
Brown (J.)	3	Thorn EMI	35
Burton Ord	30	Trust Houses	13
Cadburys	14	Turner Newall	10
Comm Union	19	Unilever	85
Courtaulds	12½	Vickers	19
Debenhams	17½	**Property**	
Distillers	28	Brit Land	12
Dunlop	6	Cap Counties	18
FNFC	8½	Land Secs	25
Gen Accident	45	MEPC	28
Gen Electric	17	Peachey	22
Glaxo	85	Samuel Props	14
Grand Met	25	**Oils**	
GUS 'A'	60	Brit. Oil & Min	4
Guardian	60	Brit Petroleum	42
GKN	17	Burmah Oil	18
Hanson Tst.	17½	Charterhall	6
Hawker Sidd	38	Premier	5
Hse of Fraser	30	Shell	60
ICI	60	Tricentrol	18
'Imps'	18	Ultramar	19
Jaguar	28	**Mines**	
Ladbroke	24		
Legal & Gen	50	Charter Cons	18
Lex Service	28	Cons Gold	44
Lloyds Bank	45	Lonrho	14
Lucas Inds	25	Rio T Zinc	56
Marks & Spencer	11		

A selection of Options traded is given on the London Stock Exchange Report Page.

LONDON SHARE SERVICE

BRITISH FUNDS

Interest Due		Stock	Price £	Last xd	Yield Int.	Yield Red.
		"Shorts" (Lives up to Five Years)				
3 Mar	3 Sep	Treas 8¼pcCnv '85	99⅜	25.1	8.82	12.59
22 May	22 Nov	Exch. 12½pc 1985	100	15.4	12.25	11.99
25 Aug	25 Feb	Exch. 11½pc '86	99[illegible]	21.1	11.76	11.73
11Oct	11Apr	Treas. 10pcCm 1986	98[illegible]	5.3	10.13	11.67
19 Nov	19 May	Treas 3pc 1986	94¼	12.4	3.18	9.64
19 Nov	19 May	Exch. 10½pc Cv '86	99¼	12.4	10.59	11.49
12Dec	12Jun	Treas 12pc 1986	100½	7.5	11.94	11.42
10 Jan	10 Jul	Treas 8½pc 1984-86‡‡	97⅜xd	3.6	8.73	11.26
29 Apr	29 Oct	Exch. 14pc 1986	103⅛	25.3	13.58	11.41
21 May	21 Nov	Exch. 2½pc 1986	92⅞	15.4	2.69	7.92
22Jul	22Jan	Exch. 13¼pc 1987	102⅝xd	17.6	12.91	11.39
10 Aug	10 Feb	Treas 10¼pcCv '87	98⅛	4.1	10.43	11.37
24Aug	24Feb	Exch 2½pc 1987	90⅛	18.1	2.75	8.45
6Oct	6Apr	Exch. 10½pc 1987	98⅝	1.3	10.65	11.33
1 Nov	1 May	Funding 6½pc '85-87‡‡	93⅛	25.3	6.98	10.66
12Dec	12Jun	Treas. 10pc 1987	97[illegible]	7.5	10.29	11.33
14Jan	14Jly	Treas 3pc 1987	90xd	7.6	3.33	8.41
3May	3Nov	Treas. 12pc 1987	101⅜	27.3	11.84	11.29
26 Jul	26 Jan	Treas 7¾pc 1985-88‡‡	93¼xd	19.6	8.31	10.81
10Nov	10May	Exch 10½pc '88	98⅛	3.4	10.69	11.23
14Dec	14Jun	Treas 9¾pc Cv '88	96⅛	8.5	10.15	11.34

Five to Fifteen Years

Over Fifteen Years

Undated

Index-Linked

INT. BANK AND O'SEAS GOVT STERLING ISSUES

CORPORATION LOANS

COMMONWEALTH & AFRICAN LOANS

LOANS

Building Societies

Public Board and Ind.

Financial

FOREIGN BONDS & RAILS

AMERICANS

AMERICANS—Cont.

Dividends Paid	Stock	Price £	Last xd	Div Gross	C'vr	Y'ld Gr's
F.My.Au.N.	Amer Medical Int $1	19½	29.3	60c	—	2.4
May Au No Fb	Amer. Nat. Res. $1	51¼xd	10.10	h$1.41	—	2.1
Ap Jy Oc Ja	American T. & T. $1	18¼	26.3	$1.20	—	5.0
My Au N F	Ameritech $1	72⅞	—	$6.00	—	6.5
Mar Jn S D	Amfac‡	21¼	16.11	$1.44	—	5.3
—	♦AndTech‡	40p	—	—	—	—
Fb My Au N	Bankamerica $1⅝	14⅝	7.5	$1.52	—	8.2
Ap Jly Oc Jan	Bankers N.Y. $10	54¼xd	28.3	$2.70	—	3.9
Ja Ap Jy Oct	BASIX Corp.	990pxd	20.6	12c	—	—
My Au N Fb	Bell Atlantic $1	71½	27.3	$6.80	—	7.5
Fb My Au N	Bellsouth $1	32	26.3	$2.60	—	6.4
Mar Jun S D	♦Beth Steel $8	12¼	4.11	40c	—	2.5
Oc Ja Ap Jy	Bowater Inc.	18xd	5.6	72c	—	3.1
Ja Ap Jly O	Brown'g-Fer. 16⅔c	38xd	17.6	$1.08	—	2.2
F My Au N	Brunswick Corpn.‡	28⅛	22.4	$1.00	—	2.8
—	♦Business Computer	300p	—	—	—	—
Jan Ap Jly O	CPC Intnl. 25c	34½xd	25.6	$2.20	—	5.0
Mr Jn Se De	CSX Corp U.S.$1.00	19⅛	21.5	$1.04	—	4.3
Mar. June S.D.	CalFed Inc $1.00	18½xd	10.5	32c	—	1.4
Oc Ja Ap Jy	Campbell Soup 60c	59	3.4	$2.50	—	3.3
F My Au N	Caterpillar Tractor‡	26¼xd	17.4	50c	—	1.5
—	Cenergy Corp. 25c	634p	—	1c	—	0.1
Fb.My.Ag.Nv.	Chase M'hattan $12.5	45⅝xd	25.4	$3.80	—	6.5
Ap Jy Oc Ja	Chemical New York	37¼	12.3	$2.48	—	6.2
Mar Jun S D	Chesebrough-Pond's $1	26	30.5	$1.92	—	5.8
Mar Jun S D	Chrysler $6¼	27½xd	12.6	$1.00	—	2.9
My Au N F	Citicorp $4	36⅞	26.3	$2.26	—	4.8
—	CityFed Fin. Corp.	990p	—	040c	—	3.4
F My Au N	Colgate-P. $1	21	22.4	$1.28	—	4.8
Mr.Jn.Se.De.	Colt Inds. $1	48¼xd	12.3	$2.50	—	4.1
F May Au N	Cont Illinois Hldgs $1	58p	27.3	—	—	—
—	♦Corporate Data Sce.	175p	—	—	—	—
Dec. Aug	Crown Zell. $5	30¼xd	5.6	$1.00	—	2.6
—	Cullinet Sftwr $0.1	19⅛	—	—	—	—
—	Damson Oil 40c	294p	—	—	—	—
Mar Jun S D	Dana Corp. $1	29⅛	22.5	$1.28	—	4.9
—	Data General	26⅞	—	—	—	—
—	♦Derma-Lock Medicl	33p	—	—	—	—
M J S D	Dun & Bradstreet $1	59¼xd	15.5	$1.88	—	2.5
F My Au N	Eaton Corpn. 50c	40⅛	1.5	$1.20	—	2.3
Mar Jun S D	♦Exxon‡	40½	7.11	$3.40	—	6.6
MrJnSepDec	FPL Group $0.01	28	27.11	h$1.88	—	7.4

CANADIANS

BANKS, HP & LEASING

Hire Purchase, Leasing, etc.

BEERS, WINES & SPIRITS

BEERS, WINES—Cont.

BUILDING, TIMBER, ROADS

CHEMICALS, PLASTICS

DRAPERY AND STORES

DRAPERY & STORES—Cont.

ELECTRICALS

ENGINEERING

ENGINEERING—Continued

FOOD, GROCERIES, ETC

HOTELS AND CATERERS

HOTELS—Continued

INDUSTRIALS (Miscel.)

INDUSTRIALS—Continued

[illegible]

INSURANCES

[illegible]

LEISURE

[illegible]

LEISURE—Continued

[illegible]

MOTORS, AIRCRAFT TRADES

Motors and Cycles

[illegible]

Commercial Vehicles

[illegible]

Components

[illegible]

Garages and Distributors

[illegible]

NEWSPAPERS, PUBLISHERS

[illegible]

PAPER, PRINTING, ADVERTISING

[illegible]

PROPERTY

[illegible]

PROPERTY—Continued

[illegible]

SHIPPING

[illegible]

SHOES AND LEATHER

[illegible]

SOUTH AFRICANS

[illegible]

TEXTILES

[illegible]

TOBACCOS

[illegible]

TRUSTS, FINANCE, LAND

Investment Trusts

[illegible]

INVESTMENT TRUSTS—Cont.

[illegible]

Finance, Land, etc

[illegible]

FINANCE, LAND—Cont.

[illegible]

OIL AND GAS

[illegible]

OVERSEAS TRADERS

[illegible]

PLANTATIONS

Rubbers, Palm Oil

[illegible]

Teas

[illegible]

MINES

Central Rand

[illegible]

Eastern Rand

[illegible]

Far West Rand

[illegible]

MINES—Continued

O.F.S.

[illegible]

Diamond and Platinum

[illegible]

Central African

[illegible]

Finance

[illegible]

Australians

[illegible]

Tins

[illegible]

Miscellaneous

Dividends Paid		Stock	Price	Last xd	Div Net	C'vr	Y'ld Gr's
		Anglo-Dominion	[illegible]				
—		Centennial Mer's	140	—	—	—	—
—		Colby Res Corp.	65	—	—	—	—
Aug.	Feb.	Cons. Murch. 10c	475	14.1	10100c	1.4	8.3
	—	Ennex Int. Ir10p	38	—	—	—	—
Sept	Feb	Hampton Areas 10p	345	24.12	3.75	2.1	3.5
	—	Highwood Res.	150	—	—	—	—
May	Aug	Homestake Mining $1	£19¼	22.5	Q20c	—	1.0
—		McFinley Red Lake	208	—	—	—	—
	—	Musto Explorations	200	—	—	—	—
—		New Sabina Res C$1	42	—	—	—	—
—		Northgate C$1	275	9.77	—	—	—
Jan.	July	RTZ	568	13.5	20.0	2.7	5.0
Jan	July	Do. 9⅛pcLn '95-2000	£125½	13.5	Q9⅛%	14.0	17.8
	—	Tara Expln $1	£11	—	—	—	—

NOTES

Unless otherwise indicated, prices and net dividends are in pence and denominations are 25p. Estimated price/earnings ratios and covers are based on latest annual reports and accounts and, where possible, are updated on half-yearly figures. P/Es are calculated on "net" distribution basis, earnings per share being computed on profit after taxation and unrelieved ACT where applicable; bracketed figures indicate 10 per cent or more difference if calculated on "nil" distribution. Covers are based on "maximum" distribution; this compares gross dividend costs to profit after taxation, excluding exceptional profits/losses but including estimated extent of offsettable ACT. Yields are based on middle prices, are gross, adjusted to ACT of 30 per cent and allow for value of declared distribution and rights.

- ● "Tap Stock".
- * Highs and Lows marked thus have been adjusted to allow for rights issues for cash.
- † Interim since increased or resumed.
- ‡ Interim since reduced, passed or deferred.
- ‡‡ Tax-free to non-residents on application.
- ◆ Figures or report awaited.
- ♥ Not officially UK listed; dealings permitted under Rule 535(4)(a).
- ♣ USM; not listed on Stock Exchange and company not subjected to same degree of regulation as listed securities.
- †† Dealt in under Rule 535(3).
- ¶ Price at time of suspension.
- ¶ Indicated dividend after pending scrip and/or rights issue: cover relates to previous dividend or forecast.
- ♦ *Merger bid or reorganisation in progress.*
- ♦ Not comparable.
- ♦ Same interim: reduced final and/or reduced earnings indicated.
- § Forecast dividend; cover on earnings updated by latest interim statement.
- ‡ Cover allows for conversion of shares not now ranking for dividends or ranking only for restricted dividend.
- ☆ Cover does not allow for shares which may also rank for dividend at a future date. No P/E ratio usually provided.
- ∥ No par value.

B.Fr. Belgian Francs. Fr. French Francs. ♦♦ Yield based on assumption Treasury Bill Rate stays unchanged until maturity of stock. a Tax free. b Figures based on prospectus or other offer estimate. c Cents. d Dividend rate paid or payable on part of capital, cover based on dividend on full capital. e Redemption yield. f Flat yield. g Assumed dividend and yield. h Assumed dividend and yield after scrip issue. j Payment from capital sources. k Kenya. m Interim higher than previous total. n Rights issue pending. q Earnings based on preliminary figures. s Dividend and yield exclude a special payment. t Indicated dividend: cover relates to previous dividend, P/E ratio based on latest annual earnings. u Forecast dividend: cover based on previous year's earnings. *v Subject to local tax. x Dividend cover in excess of 100 times.* y Dividend and yield based on merger terms. z Dividend and yield include a special payment: Cover does not apply to special payment. A Net dividend and yield. B Preference dividend passed or deferred. C Canadian. E Minimum tender price. F Dividend and yield based on prospectus or other official estimates for 1984-85. G Assumed dividend and yield after pending scrip and/or rights issue. H Dividend and yield based on prospectus or other official estimates for 1984. K Figures based on prospectus or official estimates for 1984. M Dividend and yield based on prospectus or other official estimates for 1985-86. N Dividend and yield based on prospectus or other official estimates for 1985. P Figures based on prospectus or other official estimates for 1983. Q Gross. T Figures assumed. Z Dividend total to date.

Abbreviations: xd ex dividend; xc ex scrip issue; xr ex rights; xa ex all; xd ex capital distribution.

REGIONAL & IRISH STOCKS

The following is a selection of Regional and Irish stocks, the latter being quoted in Irish currency

Albany Inv 20p	108		Arnott	165	...
Craig & Rose £1	900		CPI Hldgs	58	...
Finlay Pkg. 5p	61		Carroll Inds.	127	+2
Higsons Brew	235		Dublin Gas	51	
Holt (Jos) 25p	750		Hall (R. & H.)	59	...
IoM Stm. £1	75	−2	Heiton Hldgs.	16	...
IRISH			Irish Ropes	45	...
Fund 11¼% 1988	£98		Jacob (W & R.)	80	
Nat 9¾% 84/89	£92½	+⅛	Unidare	85	
Fin. 13% 97/02	£102⅞				

"Recent Issues" and "Rights" Page 18

This service is available to every Company dealt in on Stock Exchanges throughout the United Kingdom for a fee of £800 per annum for each security.

For Options see Unit Trusts

Extension of Ranby prison

The Home Office has awarded a £4.1m contract to **HIGGS & HILL NORTHERN** for construction of accommodation at HM Prison, Ranby, Nottinghamshire. Due for completion in March, 1987, the contract comprises five main buildings with assorted external works, covering a gross floor area of about 7,700 sq metres. Work will be carried out on two sites within previously constructed secure compounds. A main two-storey accommodation and administration block, together with a two-storey chapel and education unit and a single-storey farms and gardens building will be constructed on the larger southern site. The smaller northern site will accommodate a two-storey construction industry training building and a single-storey timber store.

★

WIMPENNY CONSTRUCTION GROUP has orders worth £3.5m for three of its main operating divisions. Largest is for the building division for a £900,000 extension at Sam Smiths Tadcaster Brewery. Other contracts in Yorkshire include Phase II industrial units at Ravensthorpe for Kirklees Development Company (£330,000), completion of Hallgate House offices, Doncaster for English Estates (£350,000) and the re-cladding and replacement of ceilings at Salendine Nook High School for Kirklees Metropolitan Council (£175,000). In Lancashire the division is to build shop and store developments in the new Wigan shopping complex under a £575,000 contract and Blackburn Borough Council has awarded Wimpenny its second contract for the re-cladding of multi-storey flats at Mill Hill (£315,000).

CONTRACTS

Access data facility to be built by Kyle Stewart

Refurbishment contracts for the Access credit card company, Thames Television and the London Hilton, worth a total of more than £6m, have been awarded to **KYLE STEWART**. Largest is a £5.7m conversion project to provide a data communications facility for Access on the former Ilford film site in Basildon, Essex. The 8100 sq metres building will have new services, including computer suites, and will be re-roofed and re-fitted. Two other buildings on the site will also be refurbished, and a car park will be laid out, with overall completion due in late 1986. At the London Hilton in Park Lane, staff facilities will be provided under a £280,000 contract to convert and upgrade basement areas, with work due for completion later this year. For Thames Television at Euston Road, new dubbing facilities and tele-cine transfer rooms are being created from existing offices under a £217,000 contract due for completion in the autumn.

★

WIMPEY CONSTRUCTION UK has been awarded two separate contracts valued at £3.25m on the Cribbs Causeway Development for J. T. Baylis in Bristol. Under one contract, valued at £2.5m, two warehouses are to be built for B. & Q. and Toys "R" Us. Each warehouse is about 4,000 sq metres and will be constructed of a metal clad and structural steel frame with facing brickwork to dado. Another, at £1m, covers provision of roads, sewers and services. Work has started for completion in October. Completion of an operational control centre and vehicle maintenance workshop for the British Gas Corporation, after the original contractor went into liquidation, is to be undertaken by Wimpey under a £1.35m contract. In Gipsy Lane, Swindon, this is a steel-framed building on piled foundations with cavity block walls and double glazing, for completion in November.

Kensington job for Taylor Woodrow

A £3m contract to build an office and residential development has been won by **TAYLOR WOODROW CONSTRUCTION**. The order for the building in Wrights Lane, Kensington, W8, has been placed by Wrights Lane Developments. Work has started for completion in October, 1986. The seven-storey building will provide 15,500 sq ft of office space and 18, one- to three-bedroomed flats. Car parking will be at basement level with plant rooms on the roof.

★

ON a contract worth nearly £1m **FAIRCLOUGH BUILDING** is carrying out a refurbishment programme on the Lucan Estate in Chelsea. For the Royal Borough of Kensington and Chelsea, the project entails internal and external rehabilitation of 45 flats and three studios in Keppel and Curran Houses, together with upgrading two neighbouring houses. Fairclough will install kitchen units, sanitary fittings, plumbing, heating and electrical systems. Roofs, balconies and brickwork will be repaired and a new entrance constructed for Curran House. Completion is scheduled for November.

★

IRWINS has been awarded a part in one of the largest construction projects in the City of London. Lloyds' Redevelopment placed its £157m office complex in Lime Street with Bovis Construction under a management contract. Irwins work, which will be worth about £2m, will consist of structural concrete work, together with granite pavings and setts to the main concourse and entrance areas, as well as to parts of the lower ground floor within the main building.

★

BRI-MAC GROUP has been awarded a design and build contract by Cyanamid of Great Britain for a £3.75m formulation complex. Other work being undertaken by the group include a ten month design and build contract value about £3m for Pirelli General at Bishopstoke, Hampshire, a cable factory and offices with completion in July.

THE WEEK IN THE COURTS

Property rights versus the public interest

FOR THREE days this week the UK Government will be defending itself before the European Court of Human Rights in Strasbourg.

This is in a series of cases involving Article 1 of the First Protocol to the European Convention on Human Rights which guarantees the right of property, subject only to confiscation in the public interest and to conditions for which the law provides.

This time, however, the Government is not in the dock, since it is seeking to uphold rulings by the commission that there has been no violation of the convention.

The main cases involve former shareholders in the shipbuilding and aircraft companies nationalised in 1977 by the last Labour Government.

The shareholders claim the compensation the Government paid for the take-over was totally inadequate and fell foul of the right to prompt and adequate compensation for their property interests. (This is discussed on Page 6.)

However, another unrelated, case on the same article involves a claim by the trustees of the late Duke of Westminster's estate.

The say that the Leasehold Reform Act 1967, whereby some 80 transactions were effected by tenants exercising their powers compulsorily to acquire the freeholds of the properties of the Duke's estate, contravened the convention.

Since 1887 25 Bills were introduced, unsuccessfully, to deal with the enfranchisement of leaseholds.

By the time of the legislation in 1967 all the politicians were agreed that the law should allow a long leaseholder the right to buy the freehold.

However, the political paths divided sharply at that point.

The Labour Government's view was that the basic principle of a reform which would do justice between the parties "should be that the freeholder owns the land and the occupying leaseholder is morally entitled to the ownership of the building which has been put on and maintained on the land."

The Conservative Opposition's view was that the leaseholder should pay a fair market price for both land and house. It was argued that everybody concerned acted on the assumption that on a known and predetermined date, both house and site would revert to the landlord.

The legislation in the 60s took away the landlord's rights to resume possession of his house and presented them to an occupying leaseholder.

That was a form of confiscation, not made the less so by the fact that the leaseholder was also given the right to buy the site.

The 1967 Act (as amended in 1969, 1970, 1974 and 1980) lays down the conditions which must be satisfied before the tenant becomes entitled to the right of acquisition of the house he has occupied.

- The tenancy must be long, defined as more than 21 years;
- The rateable value of the house must not exceed £750, or £1,500 if the house is in Greater London;
- The annual rent must be low, defined as less than two-thirds of the rateable value;
- The tenant must occupy the house as his only or main residence for at least three years before giving notice of his wish to exercise his rights.

If those conditions are present, the tenant can buy the freehold on one or other of two bases of valuation.

The 1967 basis of valuation applies to lower range properties, and the 1974 basis of valuation applies to higher-range properties, the effect of the 1967 basis of valuation is that the tenant pays approximately the site value and nothing for the buildings on the site.

The 1974 basis of valuation is more generous to landlords and provides a price approximately equivalent to the market value of both the site and the house.

The European Commission on Human Rights said in May 1984 that although it must take account of the practical effects of the Leasehold Reform Act, the essential question was whether the Government breached the trustees' rights under the convention by empowering tenants to acquire their property on the terms and conditions laid down by the Act.

The question had to be approached by considering whether the legislation was compatible with the convention rather than by separate examination of the 80 individual transactions.

The commission concluded unanimously that the phrase "in the public interest" in Article 1 did not refer exclusively to taking property for a public purpose.

Taking property could be considered in principle to be "in the public interest" where the property was taken in pursuance of legitimate public, social or other policies, notwithstanding that the property was not to be put to any public use.

Leasehold enfranchisement was such a legitimate purpose, even if the tenant could enfranchise one week and sell for a large sum of money, with vacant posession, the next.

The crucial issue remained whether interfering with the landlord's property rights was proportionate to the legitimate aim of pursuing a policy of leasehold enfranchisement.

The right to compensation for the state taking property is inherent in Article 1 of the First Protocol in so far as the payment of compensation may be necessary to preserve the appropriate relationship of proportionality between the interference with the individual's rights and the public interest. Here, however, the state is entitled to invoke the margin of appreciation.

A violation of Article 1 could be held to arise only if it were clearly established that there was a real and substantial disproportion between the burden imposed on the individual and what could be reasonably considered justifiable in the light of the public interest objectives being pursued by the state.

This margin of appreciation by national authorities was broad, and could be overridden by the convention only where there was a real sense of disproportionate treatment.

The commission thought that the purpose of leasehold enfranchisement and the terms and conditions for enfranchisement in the UK legislation established full compliance with the public interest requirement and was subject to conditions provided for by law. There seems little prospect that the court will think otherwise.

Justinian

INSURANCE

Attempt to end legal wrangling on asbestos disease

BY TERRY DODSWORTH IN NEW YORK

MR HARRY WELLINGTON, dean of the Yale Law School, may go down in U.S. legal history as a key figure in the development of product liability law. He emerged last week as the main architect of what will now be known as the Wellington Agreement, a deal between asbestos companies and their insurers designed to bring more equitable treatment to victims of asbestos-related diseases.

There are, as the signatories acknowledge, some weaknesses in the agreement, most notably the absence of Manville, the largest asbestos manufacturer, which is unable to comply because it is still under the jurisdiction of the bankruptcy courts. However, set against these flaws there are some radical innovations in the pact, which, according to Mr Wellington, may provide a precedent for settling big suits in other sectors of the U.S. economy.

To see why the deal was negotiated, it is necessary to consider the problems facing asbestos victims two-and-a-half years ago, when companies and their insurers first began to talk of an alternative process of settling the legal wrangling that had grown up over damages claims.

Asbestosis, a debilitating disease which attacks the lungs, is believed to be the biggest incidence of an industry-related sickness to have come to the courts. In the U.S. alone, about 30,000 cases have been filed and 500 more are appearing every month. Damages payments so far amount to about $1bn (£781m) and are expected to reach several billion dollars before the issue is closed.

With such large sums at stake, the product liability lawyers have descended on the issue in large numbers—and they have found plenty to argue about. Many asbestos-related health problems do not appear until up to 40 years after exposure. It can therefore be difficult to decide which manufacturer was responsible for a particular sickness, and equally who the insurers were.

A great deal of time has consequently been spent on legal arguments between the companies and their different insurers, often leaving victims out in the cold. Plaintiffs have been found to receive only about 35 cents of every dollar awarded by the courts, and with 60 different legal jurisdictions already involved, payments have varied enormously for victims of similar illnesses.

The new agreement seeks to end what Mr Wellington calls "this legal nightmare" in several ways. First, it will establish a private-sector alternative to the courts—a new Asbestos Claims Facility—to which victims can apply for damages.

Victims can still pursue conventional litigation but if they choose to approach the Claims Facility, they are promised swift resolution of their claim and the avoidance of large legal fees.

Second, the new agreement will consolidate hearings on claims in two centres, Boston and San Francisco. This provision is aimed at ensuring more equitable arrangements for people suffering from identical sicknesses, while speeding up award procedures.

Third, about 20 insurers and 30 asbestos companies have reached agreement on who pays what, so that damages claims will not become mixed up in wrangling over who is responsible for the payments.

PARLIAMENTARY DIARY

TODAY

Commons: Debate on an Opposition motion entitled the failure of the Government's policies to meet Britain's skill needs. Motion on the European Communities (Definition of Treaties) (Third ACP-EEC Convention of Lome) Order. Opposed private business at 7.00 pm.

Lords: Enduring Powers of Attorney Bill, consideration of Commons amendment. Ports (Finance) Bill, Third Reading. Local Government Bill, Report. Gaming (Bingo) Bill, Committee. Agricultural Training Board Bill, Committee. Rating (Revaluation Rebates) (Scotland) Bill, Committee.

Select Committees: Environment — Subject: Radioactive waste. Witness: TUC, National Union of Seamen (Room 20, 4.30 pm). Home Affairs: Sub-committee on Race Relations and Immigration — Subject: Immigration from the Indian sub-continent. Witness: Home Office (Room 6, 4.15 pm). Foreign Affairs — Subject: Unesco. Witnesses: United Nations Association; the Britain in Unesco Committee (Room 8, 4.30 pm).

TOMORROW

Commons: European Communities (Finance) Bill. Consideration of Lords amendments to the Representation of the People Bill.

Lords: Wildlife and Countryside (Amendment) Bill, Third Reading. Social Security Bill, Committee. Hill Farming Bill, Third Reading. Local Government (Access of Information) Bill, Report. Rating (Revaluation Rebates) (Scotland) Bill, Committee.

Select Committees: Education, Science and the Arts — Subject: Scrutiny session on the Green Paper on the development of higher education into the 1990s. Witnesses: Rt Hon Sir Keith Joseph, MP, Education Secretary, and officials (Room 15, 10.45 pm). Parliamentary Commissioner for Administration — Subject: Annual Report for 1984. Witness: Sir Geoffrey Otton (Room 5, 4.30 pm). Defence—Subject: Future of the Royal Dockyards. Witnesses: Plymouth City Council; Devon County Council and Cornwall County Council. Mr John Gannett (Room 16, 4.50 pm). Committee on a Private Bill — Felixstowe Dock and Railway (Room 11, 11.00 am).

WEDNESDAY

Commons: Remaining stages of the Food and Environment Protection Bill. Motions on the Northern Ireland Act 1974 (Interim Period Extension) Order and the Northern Ireland (Emergency Provisions) Act 1978 Continuance Order.

Lords: Motion to agree the second report from the Procedure Committee. Motion to take note of the statement on the Defence Estimates 1985. Unstarred question asking the Government whether they are satisfied that the new proposals for the control and management of the financial and investment services in the City of London will promote the interests of individual small shareholders.

Select Committees: Welsh Affairs—Subject: Proposed redundancies at BP Llandarcy. Witnesses: BP: West Glamorgan County Council: union representatives (Room 18, 10.30 am). Defence — Subject: Future of the Royal Dockyards. Witnesses: MOD, Council of Civil Service Unions (Room 16, 10.50 am). Trade and Industry — Subject: Tourism in the UK. Witness: Rt Hon Peter Rees MP, Chief Secretary to the Treasury (Room 15, 11.00 am). Public Accounts — Subject: Funding of Scottish colleges. Witness: Mr J. A. Scott, Scottish Education Department (Room 16, 4.15 pm). Social Services — Subject: Social security reviews. Witness: Mr Tony Newton MP, Social Security Minister (Room 21, 4.15 pm). Environment—Subject: Radioactive waste. Witnesses: Association of Metropolitan Authorities; Association of County Councils; Bedfordshire County Council (Room 20, 4.30 pm). Trade and Industry—Subject: Rolls-Royce. Witnesses: representatives of the company (Room 15, 4.30 pm). Committee on Private Bills—Felixstowe Dock and Railway Bill (Room 11, 10.30 am); British Railways Bill (Room 9, 5.00 pm).

THURSDAY

Commons: Opposition debate on cuts in child benefit, followed by debate on Housing Benefit. Motion on the Army, Air Force and Naval Discipline Acts (Continuation) Order.

Lords: Controlled Drugs (Penalties) Bill, Committee. Social Security Bill, Committee. Road Traffic (Production of Documents) Bill, Third Reading. Sexual Offences Bill, Report.

Select Committee — Felixstowe Dock and Railway Bill (Room 11, 10.30 am).

FRIDAY

Commons: Debate on the policing of the metropolis on a motion for the adjournment.

Lords: Weights and Measures Act 1963 (Various Foods) (Amendment) Order, motion for approval. Insurance (Fees) Bill, Committee. Town and Country Planning (Amendment) Bill, Second Reading. Education Support Grants (Amendment Regulations 1985, motion for approval. Surrogacy Arrangements Bill, Committee.

WEEK'S FINANCIAL DIARY

The following is a record of the principal business and financial engagements during the week. The board meetings are mainly for the purpose of considering dividends and official indications are not always available whether dividends concerned are interims or finals. The sub-divisions shown below are based mainly on last year's timetable.

COMPANY MEETINGS—
Aberfoyle, 19 The Green, Richmond, Surrey, 11.30
BSG Intnl, Albany Hotel, Hill Street, Birmingham, 11.00
Crowther (John), Union Mills, Milnsbridge, Huddersfield, 12.00
Earlys of Witney, Witney Mill, Witney, Oxon, 12.00
Gartmore American Securities, 2 St Mary Axe, EC, 11.00
Glanfield Lawrence, Dog and Fox, High Street, Wimbledon, SW, 10.30
Marshalls Universal, 30-32 St Mary Axe, EC, 12.00
Micro Business Systems, Vine Lane, Tooley Street, SE, 12.00

TODAY

BOARD MEETINGS—
Finals:
Barton Group
Brown and Tawse
Cropper (James)
Fashion and General Invest
Health Care Services
Lawrie
Old Court Currency Fund
Racal Electronics
Stonehill
Thermal Scientific
Volex
Interims:
Carroll Inds
Nash Inds

DIVIDEND & INTEREST PAYMENTS—
Aberdeen Trust 2.5p
Harris Queensway 2.75p
Italy (Republic of) Fltg Rate Notes 2005 $67.81
Korea Exchange Bank Fltg Rate Notes 1993 $483.44
Metropolitan Water Kent Waterworks 3pc Db 1.5pc
Midland Intnl Financial Services Gtd Fltg Rate Notes 1989 $241.72
Nationwide Bldg Society 10¼pcBds 24/6/85 5.375pc. 10⅝pcBds 30/12/85 5.3125pc
New Zealand Steel Devpt Fltg Rate Notes 1992 $480.28
Peachey Property 6¾pcDb 1983-88 3.375pc
Securities Trust of Scotland 2.7p

TOMORROW

COMPANY MEETINGS—
Duport, Midland Hotel, New Street, Birmingham, 12.30
Feedex Agricultural Inds, Daisy Hill, Burstwick, North Humberside, 6.00
Foseco Minsep, 285 Long Acre, Nechells, Birmingham, 12.00
Hartons, Great Eastern Hotel, Liverpool Street, EC, 12.00
Lorlin, Ghyll Manor Hotel, Rusper, Sussex, 12.00
Miles, 33 Tower Hill, St Katherines Way, EC, 12.00
Sears, Selfridge Hotel, Orchard Street, W, 12.00
Sheraton Securities, Inn on the Park, Hamilton Place, Park Lane, W, 12.00
Smith St Aubyn, White Lion Court, Cornhill, EC, 12.00

BOARD MEETINGS—
Finals:
Anchor Intnl Fund
Ferranti
Halma
Hambros
Hargreaves
London Invest Trust
Mercury Securities
Optometrics (U.S.A.)
Parrish (J. T.)
Petbow
RFD
Shaw Carpets
Whitecroft
Interims:
Crest Nicholson
Jones (Ernest) (Jewellers)
Standard Securities

DIVIDEND & INTEREST PAYMENTS—
Albany Invest Trust 2.2p
Bankers Trust Overseas Finances Fltg Rate Notes 1994 $24.28
Cheesebrough-Pond's 0.5 cts
Halliburton 45 cts
Hercules 40 cts
London Secs 10pcDb 1993-95 5pc
Newcastle and Gateshead Water 7pc 3.5p. 4.9pc Cons 2.45p. 4.9pc 2.45p. 4.2pc 2.1p. 3.5pcPf 1.75p. 2.45pcPf 1.225pc.
Samuel Props 1.6p

WEDNESDAY JUNE 26

COMPANY MEETINGS—
British-Borneo, 49 Moorgate, EC, 12.00
British Syphon, Mottram Hall Hotel, Wilmslow Road, Mottram St Andrew, Cheshire, 12.00
Brown (A.), 33 Queen Anne Street, W, 1.30
Case, Crabtree Road, Thorpe, Egham, Surrey, 10.00
London Park Hotels, Grand Hotel, Southampton Row, WC, 11.00
More O'Ferrall, Browns Hotel, Albemarle Street, W, 10.00
New England Properties, 243, Knightsbridge, SW, 2.30
United Friendly Insurance, 42 Southwark Bridge Road, SE, 12.30

BOARD MEETINGS—
Finals:
Ariel Inds
BPB Inds
Booth (John) (Bolton)
Braithwaite Engineers
Brickhouse Dudley
Cable and Wireless
Country Gentlemen's Association
First National Finance Corpn
Hampton Gold Mining Areas
Henriques (Arthur)
Hogg Robinson
Scantronic
Interims:
First National Securities
Hardys and Hansons
Morceau

DIVIDEND & INTEREST PAYMENTS—
British Syphon 1.75p

THURSDAY JUNE 27

COMPANY MEETINGS—
Eucalyptus Pulp Mills, Johnson House, Wellington Road, Wokingham, Berks, 3.00
Flight Refuelling, Painters Hall, 9 Little Trinity Lane, EC, 12.00
Grampian Television, Television Studios, Queens Cross, Aberdeen, 12.00
Hay (Norman), Berkeley Arms Hotel, Bath Road, Cranford, Middlesex, 11.00
Jermyn Invest Company, 418-422 Strand, WC, 4.00
South Staffordshire Waterworks, Green Lane, Walsall, 12.30
Wettern Bros, Fairfield Halls, Park Lane, Croydon, 11.00

BOARD MEETINGS—
Finals:
Allied Colloids
ERF
Electric and General Invest
Grampian Television
Imperial Continental Gas Association
Kleen-E-Ze
Latham (James)
Longton Industrial
MK Electric
Toshiba
Walker and Staff
Watts Group Intnl
Interims:
Greenwich Cable Communications
Trusthouse Forte
Wheway Watson

DIVIDEND & INTEREST PAYMENTS—
African Devpt Bank Fltg Rate Notes 1996 $477.12
Bank of Montreal Fltg Rate Dept Notes 1994 £171.71
Berry Pacific Sterling Fund Pf 14.4p
Chemical New York NV Fltg Rate Sub Notes 1994 $245.97
Girozentrale Und Bank Der Ost Spark Fltg Rate Notes 1991 $24.76
Scandinavian Financial Stlg Fltg Rates Notes 1990 £34.82
Scottish Mortgage and Trust 4.3p
Yorkshire Intl Fin Gtd Fltg Rate Notes 1994 £171.71

FRIDAY JUNE 28

COMPANY MEETINGS—
Consolidated Venture Trust, 11 Devonshire Square, EC, 11.00
Helene of London, Berners Hotel, Berners Street, W, 12.00
TR Industrial and General Trust, 2 Puddle Dock, EC, 12.45

BOARD MEETINGS—
Finals:
Dwek
Estates and Agency
Textured Jersey
Interims:
Baynes (Charles)
Throgmorton Trust

DIVIDEND & INTEREST PAYMENTS—
Adwest Group 6pcLn 1983-88 3pc. 6pc Ln 1983-88 (2nd series) 3pc
Alexanders Hldgs 9½pcPf 3.325p
Allianz Versicherungs DM 11
American Cyanamid 0.475 cts
Anglovaal 5pcPf 5 cts. 6pcPf 6 cts
Argyl Stores 6¾pcLn 1992-2007 3⅜pc
Arnott Dublin 5.5p. 6pcPf 1.95p. 4pcDb 2pc
Ash and Lacy 8pcDb 1987-92 4pc
Avon Rubber 4.9pcPf 2.45p
BASF DM 9
Bampton 8½pc 1988-93 4¼pc. 8½pcLn 2002-07 4¼pc
Bampton Prop 6½pc 1983-88 3¼pc. 6½pc 1985-88 3¼pc
Barratt Devpts 6½pcLn 1992-97 3¼pc
Black and Decker Mnfg 16 cts
Bosse Massimi Pollitt 4.5p
Bowyers (Wiltshire) 9½pcLn 190-95 4¾pc
Bridon 6¾pcLn 2002-07 3⅜pc. 7¼pcLn 2002-07 3⅝pc. 8pcDb 1988-93 4pc. 10¼pcDb 1991-96 5⅛pc
Bristol Waterworks 3½pcDb 1¾pc. 4pc Db 2pc. 4¼pcDb 2⅛pc
Britannic Assurance 5pcPf 2.5p
Buckley's Brewery 4½pcDb 2¼pc
Capital and Counties 4.2pcPf 2.1p
Cater Allen Gilt Edged Fund Pf 35p
Celanese Corpn 1.1 cts
Charnos 7pcPf 2.45p
Chester Waterworks 7½pcDb 1991-93 3¾pc. 8pcDb 1992-94 4pc
Chloride Group 7¾pcDb 1985-90 3⅞pc
Clive Discount Hldgs 1.1p
Coats Patons 4pcPf 1.4p. 6pcPf 2.1p. 4½pcLn 2002-07 2¼pc. 6¼pcLn 2002-07 3⅛pc. 7½pcLn 1990-95 3¾pc
Collins (William) 6pcDb 1993-98 3pc
Colman (E. Alec) Invests 8¼pcDb 1986-91 4⅛pc
Comprehensive Financial Services 1.3p
Conoco 7½pcLn 1987-93 3¾pc. 8pcLn 1987-94 4pc
Continental Illinois Overseas Financial Corpn Fltg Rate Notes 1994 $244.38
Craigton Combined Secs 8¾pcDb 1986-91 4⅜pc
Cramphorn 1.667p
Croda World Traders 7pcPf 2.45p
Debenhams 7¼pc2ndDb 1991-96 3⅝pc
Eula Int $241.72
Expamet Intl 4½pcPf 1.575p
Fergebrook Group 2p
Finlay Packaging 2.5p
Fitch Lovell 6½pcPf 2.275p
Folkestone and District Water 2.8pc 1.4p. 4.9pcPf 1986-88 2.45p. 4pcDb 2pc. 5pc Db 2½pc. 7pcDb 3½pc
GATX Corpn 30 cts
General Instrument Corpn 6.25 cts
Genfinance Fltg Rate Notes 1992 $475.47
Glasgow Stockholders Trust 11.5pcDb 2009 6.585pc
Gleeson (M. J.) Group 1.5p
Grampian Television N-vtg A 3.7p
Guest Keen and Nettlefolds (UK) 7¼pc Db 1987-92 3⅝pc. 9¾pcDb 1991-96 4⅞pc. 10⅝pcDb 1990-95 5¼pc. 6¾pc Db 1984-89 3⅜pc. 7½pcDb 1986-91 3¾pc. 7¼pcDb 1987-92 3⅝pc. 10¾pc Db 1992-97 5⅜pc. 6½pcDb 1984-89 3¼pc. 6pcDb 1984-89 3pc
Guest Keen and Nettlefolds 6½pcLn 1988-93 3¼pc. 6¼pcLn 1985 3⅛pc
Haden 5½pcPf 1.925p
Hapoalim Intnl Fltg Rate Notes 1988 $480.28
Higgs and Hill 7pcPf 2.45p
Imperial Cold Storage and Supply 5½pc Pf 2.75 cts
Ingall Industries 1.19p
Juliana's Hldgs 1.225p
Laird Group 8pcLn 1988-93 4pc
Lep Group 4½pcPf 2.25p
Leumi Intnl Invests Fltg Rate Notes 1986 $47.83
Ley Service 6½pcPf 2.275p. 8½pcLn 1992-1997 4¼pc
London and Midland Industrials 5pcPf 1.75p. 8½pcDb 1989-94 4¼pc
Metalrax Group 7½pcPf 2.625p
Middle Witwatersrand (Western Areas) 8pcPf 4 cts
Midland Bank 7½pcLn 1983-93 3¾pc. 10¼pcLn 1993-98 5⅛pc
New London Props 8¼pcDb 1957-90 1⅜pc. 5¼pcDb 1983-90 2⅝pc
Newey Group 5pcPf 1.75p
News Intnl 7pcPf 2.45pc. 8pcPf 2.8p. 7¼pcDb 1985-90 3⅝pc
Northern Telecom 0.125 cts
Ovenstone Invests 2 cts
Paramount Realty Hldgs 9pcDb 1986-91 4½pc
[illegible]

SATURDAY JUNE 29

DIVIDEND & INTEREST PAYMENTS—
[illegible]

SUNDAY JUNE 30

DIVIDEND & INTEREST PAYMENTS—
[illegible]

Cummins Engine 3¼pcLn 1978-94 1⅝pc
Cystic Fibrosis Research Invest 5pcDb 2½pc
DRG 7¼pcLn 1986-91 3⅝pc
Dalgety 6½pcDb 1985-95 3¼pc. 7pcDb 1982-87 3½pc. 8¼pcDb 1988-93 4⅛pc
Dead Sea Works 5pcDb 2002 2½pc
Delta Group 6pcPf 2.1p. 4½pc2ndPf 1.575p. 4½pcDb 1985-90 2¼pc. 7¼pc Db 1985-90 3⅝pc
Denmark (Kingdom of) 13pcLn 2005 6½pc
Derby Trust 7½pcDb 1999-2000 3¾pc
Desoutter Bros (Hldgs) 5.25pcPf 2.625p
[illegible]

7½pcDb 91-93 3¾pc. 8pcDb 92-94 4pc. 4.2pcPf 86-88 2.1p. 7pcDb 91-93 3½pc. 3.5pcCons 1.75p. 3.5pcMax 1.75p. 3.5pcCons 1.75p. 12pcDb 90-92 6pc. 4pcDb 2pc. 5pcDb 2½pc
Milford Docks 3½pcDb 1¾pc
Millfields Inv 7pcPf 2.45p
Mitchell Cotts 4.25pcPf 2.175p
More O'Ferrall 10pc2ndPf 5p
Mucklow (A. and J.) Gp 7pcUf 2.45p
Murray Inter Tst 3¼pcDb 1⅝pc. 5½pcDb 81-86 2¾pc
Narborough Plantations 20pcPf 1p
National Westminster Bank 9pcLn 1993 4½pc
[illegible]

WORLD STOCK MARKETS

OVER-THE-COUNTER

Nasdaq national market, closing prices, June 21

Continued from Page 33

Stock	Sales (Hnds)	High	Low	Last	Chng
Prtronx		914	9½	9	9¼
ProdOp .16		14	4¾	4½	4¾ + ⅛
ProgCs		310	33¼	32¾	32¾ − ¼
PropTr 1.20		133	13½	13⅜	13½
Provin		78	17⅝	17⅝	17⅝
Pullmn		2138	6⅝	6¼	6¼
PurtBn .40		10	22	22	22
QMSs		3024	8½	8⅛	8½ + ⅛
Quadrx		131	6¾	6½	6½ − ¼
ShonSos		47	13⅛	13⅛	13⅛ − ⅛
Silicon		699	6⅞	6⅝	6¾ + ⅛
SiliconS		137	10½	10⅛	10¼ − ⅛
SilicVal		190	13¼	12½	12¾
Siliconx		3	17¼	17¼	17¼
Siltec		17	5⅝	5⅛	5⅝
Simpln .80		127	14⅝	14⅝	14⅝ − ⅛
Sippins		18	14¼	14	14¼
Sizzler		20	23¼	22¾	23 − ¼

[illegible]

CANADA

TORONTO

Closing prices June 21

[illegible]

MONTREAL

Closing prices June 21

[illegible]

AUSTRIA

1985 High	Low	June 21	Price %
391	295	Credit'stalt Pfd.	376
555	350	Goesser	550
1,900	400	Interunfall	1,850
383	222	Laenderbank	372
670	335	Perimooser	610
220	155	Steyer-Daimler	180
620	245	Veitscher Mag	611

DENMARK

1985 High	Low	June 21	Price Knr. %
312	257	Andelsbanken	302
645	520	Baltic Skand	575
335	259	CopHandelsbank	300
575	460	D. Sukkerfab	485
322	260	Danske Bank	317
1,260	1,085	De Danske Luft.	1,100
245	129	East Asiatic	219
1,000	770	Forenede Brygg.	890
155	88	Forenede Damp.	145
443	352	GNT Hldg	400
530	340	I.S.S.B.	435
666	464	Jyske Bank	665
1,895	1,315	Novo Ind	1,620
292	223	Privatbanken	281
375	280	Provinsbanken	344
258	217	Smidth (F.)	250
1,150	880	Sophus Berend.	1,046
497	395	Superfos	476

GERMANY

1985 High	Low	June 21	Price Dm
146.2	100.3	AEG-Telef	146.2
1,562	861	Allianz Vers.	1562xr
224.5	176.8	BASF	224.5
253.8	185	Bayer	222.9xd
350	309.5	Bayern Hypo	349
384	318.2	Bayern-Verein.	381xd
334	261	BHF-Bank	328
456	351	BMW	456
243	187.5	Brown Boveri	239
211.5	162.1	Commerzbank	201.5
156.5	114.5	Conti Gummi	156.5
856	593.5	Daimler-Benz	856
370	338	Degussa	362
172	150	D'sche Babcock	165
570.5	383.5	Deutsche Bank	570.5xd
233.5	178.8	Dresdner Bank	227xd
172.8	147	GHH.	161.8
560	460	Hochtief	557
239.7	182.5	Hoechst	224.9xd

[illegible]

NORWAY

[illegible]

AUSTRALIA

[illegible]

ITALY

[illegible]

NETHERLANDS

[illegible]

SWEDEN

[illegible]

SINGAPORE

[illegible]

SWITZERLAND

[illegible]

SOUTH AFRICA

[illegible]

HONG KONG

[illegible]

JAPAN

[illegible]

SPAIN

[illegible]

FRANCE

[illegible]

BELGIUM/LUXEMBOURG

[illegible]

Indices

NEW YORK

DOW JONES

	June 21	June 20	June 19	June 18	June 17	1985 High	1985 Low	Since Compil'n High	Since Compil'n Low
●Industri'ls	1324.48	1299.75	1297.38	1304.77	1298.33	1327.28 (6/6)	1184.96 (4/1)	1327.28 (6/6/85)	41.22 (2/7/32)
H'me Bnds	80.01	80.13	80.09	80.05	79.96	80.24 (18/6)	72.27 (20/5)	—	—
Transport	649.56	639.94	639.28	643.38	639.86	659.83 (6/6)	553.03 (4/1)	659.83 (6/6/85)	12.32 (8/7/32)
Utilities	166.85	164.56	164.55	165.37	164.55	166.85 (21/6)	146.54 (4/1)	166.85 (21/6/85)	10.5 (28/4/42)
TradingVol 000's	125,40	87,500	108,278	106,930	82,170				

●Day's High 1325.93 (1305.44) low 1293.79 (1287.75)

Industrial div. yield %	June 19	June 7	May 31	year ago (approx)
	4.71	4.66	4.66	5.21

STANDARD AND POOR'S

	June 21	June 20	June 19	June 18	June 17	1985 High	1985 Low	Since Comp'n High	Since Comp'n Low
Indust'ls	206.96	205.73	205.62	206.45	205.61	211.13 (6/6)	128.24 (4/1)	211.13 (6/6/85)	3.62 (30/6/32)
Comp's'te	189.66	186.73	186.63	187.34	186.53	191.06 (6/6)	165.58 (4/1)	191.06 (6/6/85)	4.40 (1/6/32)

	June 19	June 12	June 5	year ago (approx)
Industrial div. yield	3.80	3.77	3.71	4.19
Industrial P/E ratio	11.65	11.64	11.70	10.96
Long Gov. Bond yield	10.22	10.31	10.05	13.61

N.Y.S.E. ALL COMMON

Rises and Falls

	June 21	June 20	June 19
Issues Traded	2,004	2,007	2,005
Rises	1026	709	795

[illegible]

TORONTO

[illegible]

NEW YORK ACTIVE STOCKS

[illegible]

[illegible]

Closing prices, June 21

NEW YORK STOCK EXCHANGE COMPOSITE CLOSING PRICES

12 Month High	12 Month Low	Stock	Div.	Yld.	P/E	Sls 100s	High	Low	Close Quote	Ch'ge Prev. Close
23½	16	AAR	.48	2.6	14	16	18½	18⅜	18⅜	+⅛
18¼	8⅝	AGS			12	155	14⅛	13¾	14	+¼
21½	13¾	AMF	.50	2.7	58	1663	18⅝	18½	18½	
48⅛	24¼	AMR			10	3033	45¼	44⅞	45⅛	+½
22⅞	18⅝	AMR pf2.18		9.7		22	22⅜	22¼	22⅜	+⅛
14¼	7¾	APL				10	8⅝	8⅝	8⅝	-⅛
61⅛	44⅝	ASA		24.0		221	50	49⅝	50	+⅝
27	12½	AVX	.32	2.5	10	391	13¼	12¾	13	+¼
27	16	AZP	2.72	10.	6	705	27	26¾	26¾	
57¼	38¾	AbtLab	1.40	2.5	17	3086	57⅛	56¼	57⅛	+⅜
25⅞	17⅞	AccoWd	.50	2.2	17	70	22½	22¼	22¼	-⅜
24¾	12½	AcmeC	.40	2.6		181	15⅜	15¼	15⅜	+⅛
17½	15	AdaEx	1.92e	11.		45	17¼	17	17¼	+⅛
20	11⅞	AdmMl	.32	1.9	7	31	17	16⅝	17	+⅝
19½	8⅝	AdvSys	.53t	4.7	16	38	11⅜	11¼	11¼	-⅛
41⅛	22⅞	AMD			11	3861	24¾	23⅝	24⅝	+⅞
12¾	6⅞	Advest	.12	1.4		87	8⅝	8⅜	8½	
14⅝	9	Aerflex			12	146	12¾	12½	12¾	
47	27¼	AetnLf	2.64	5.7	34	4550	46¼	45⅝	46¼	+⅜
57⅝	52⅝	AetL pf5.79e		10.		22	55⅝	55	55¼	-⅛
37⅜	17⅞	Ahmns	1.20	3.5	14	838	35	34	34⅜	-1¼
3⅜	2½	Aileen				1	3	3	3	+⅛
54	38⅝	AirPrd	1.20	2.2	12	517	54	53¼	54	+⅜
24⅝	13	AirbFrt	.60	3.0	11	30	20⅛	19¾	20	
2	1	AlMoa s				75	1¾	1⅝	1¾	+⅛
28¼	21	AlaP pf2.92e		11.		618	28	27⅝	27⅝	-⅜
33⅝	26¾	AlaP pfA3.92		12.		54	32¾	32⅛	32⅜	-¼
8⅛	6¼	AlaP dpf.87		11.		31	8	7⅞	7⅞	-¼
82	61½	AlaP pf 9		11.		z1460	79	79	79	-3
85½	63½	AlaP pf 9.44		11.		z60	83	82½	82½	-1½
74	57	AlaP pf 8.16		11.		z300	73	73	73	+1
71	56	AlaP pf 8.28		12.		z420	70¼	69	70¼	+¼
16⅛	11¼	Alagsc	1.04	6.8	9	21	15⅜	15⅛	15⅜	+⅛
25¼	9¼	AlskAir	.16	.7	10	273	23½	22⅞	23½	
18¾	10⅞	Albrto s	.38	2.2	20	142	17½	16½	17½	+⅞
33¼	23¼	Albtsns	.76	2.4	13	672	32	31⅝	32	+¾
31¼	23¼	Alcan	1.20	4.8	12	1540	25¼	24½	25¼	+¾
37⅛	27⅛	AlcoStd	1.20	3.4	12	49	35⅛	34⅝	34⅞	-⅜
32	17	AlexAlx	1	3.3		293	29⅞	29½	29⅞	-⅛
26½	20⅜	Alexdr			21	123	23½	23¼	23¼	-¼
89½	72¼	AllgCp	2.06t	2.5	25	16	81¼	80¾	81	
28¾	18¾	AlgInt	1.40	6.1		253	23⅛	22⅝	23⅛	+⅛
98	81⅝	Algl pfC11.25		12.		13	97¾	97⅝	97⅝	+⅛
34⅛	24⅝	AllgPw	2.70	8.0	10	1849	33⅞	33⅝	33¾	
20⅞	15¾	AllenG	.60b	3.2	14	219	18⅞	18⅝	18¾	-¼
46¾	28¼	AldCp	1.80	4.3	8	6773	42	41¼	41⅝	-⅛
66	53⅞	AldCp pf6.74		10.		50	64½	64¼	64½	+¼
113¼	99	AldCp pf 12		11.		12	111	110¾	110¾	+⅛
106⅜	100¼	AldC pf 12.31e		12.		1	102½	102½	102½	
23½	15¼	AlldPd			16	24	17⅞	17⅝	17⅞	+⅛
59½	40¾	AlldStr	2.12	3.8	8	2456	56½	55¾	55⅞	
12⅝	5⅛	AllisCh				180	5⅝	5⅜	5⅝	+⅛
34⅞	24	AlisC pf				10	34⅞	34⅜	34⅞	+¼
28⅞	20	ALLTL	1.84	6.8	9	33	27¼	27	27	-¼
39⅞	29¾	Alcoa	1.20	3.6	17	1702	33¼	32¼	33⅛	+1
22¼	14¾	Amax	.20	1.3		1613	15	14½	14⅞	
40	32½	Amax pf	3	8.9		4	33¾	33¾	33¾	-⅜

Continued on Page 33

FINANCIAL TIMES SURVEY

Electronics in Europe

Faced with fierce competition from the U.S. and Japan, Western Europe's electronic industries are attempting to marshal resources to make a comeback in world markets. Europe's capacity for advanced research still remains considerable

Turbulent and volatile markets

By Guy de Jonquieres

EVEN BY the standards of a business whose lifeblood is change, and where unpredictability is one of the few constants, the mid-point of 1985 finds the world electronics industry in a state of exceptional turmoil.

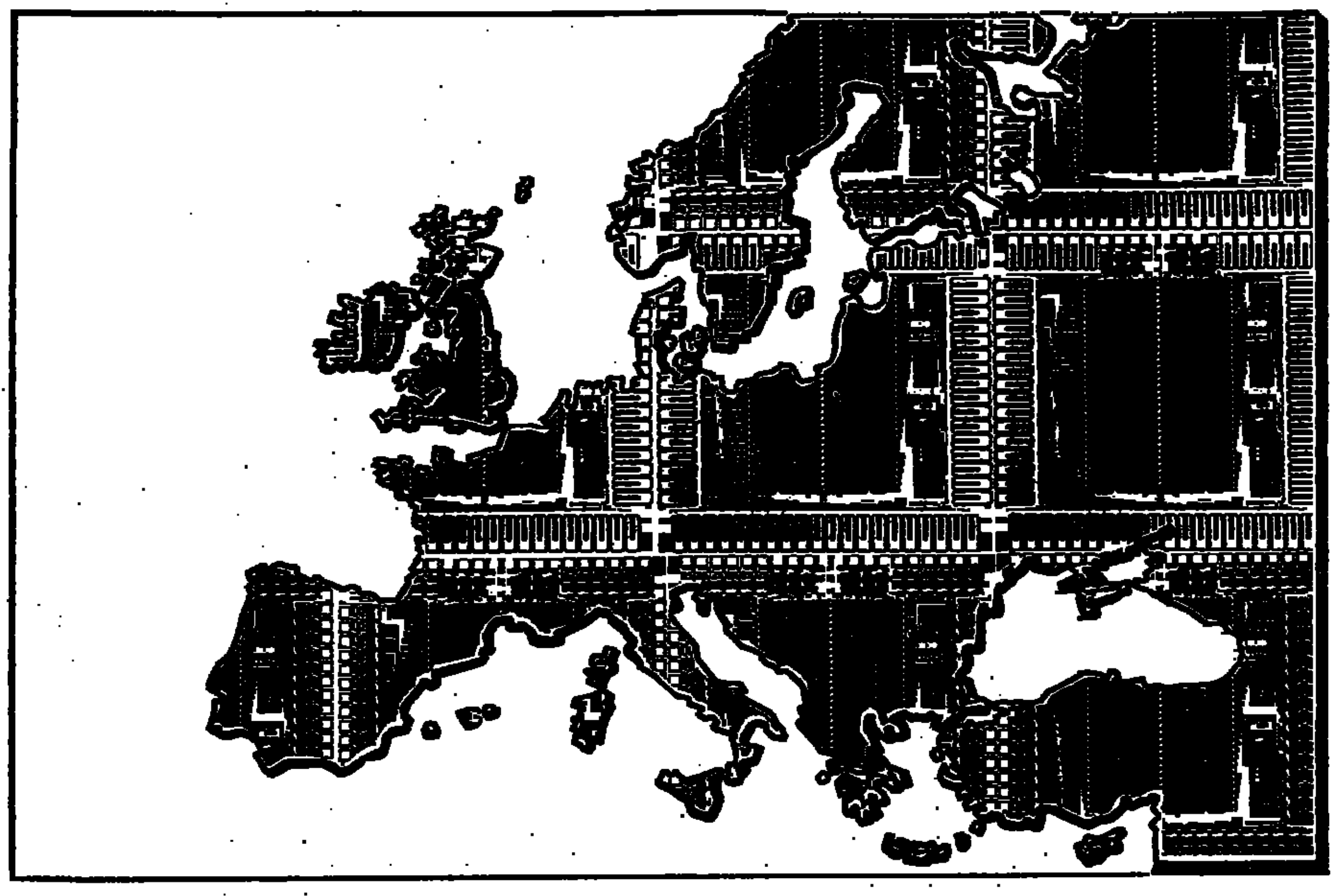
The exhubrant growth rate which carried the industry's performance to new peaks last year is fading fast, bringing troubles in its wake. Semiconductor markets, the most sensitive barometer of activity in the sector, have been badly hit by a weakening of demand and excessive investments in capacity.

In the U.S., the computer industry is in the throes of what threatens to be a far-reaching shakeout which has already sent many smaller companies reeling and has prompted merger talks between some larger ones. In California's Silicon Valley, nervousness has abruptly replaced buoyant self-confidence, and formerly abundant supplies of venture capital are drying up.

Japan is continuing to intensify its challenge to American high-technology leadership in a range of markets, including semiconductors and telecommunications. At the same time, the Japanese themselves face new competition from other Asian countries, notably South Korea, which are mounting ambitious efforts to capture shares of international electronics markets.

Adding further uncertainty is President Reagan's proposal to spend $26bn in research on the Strategic Defence Initiative (SDI). While there are widespread doubts that the project can attain its stated goal of providing a shield against nuclear attack, many other countries are concerned that it could give the U.S. a massive advantage in key areas of advanced technology for the rest of this century.

Amid these turbulent and confusing cross currents, Western Europe is attempting to marshal its disparate resources in a renewed bid to stage a comeback on world electronic markets, in many of which its industries have been consigned to a steadily dwindling role for years.



● The pressure is mounting for Western Europe's larger electronics groups to seek closer technical collaboration—or lose new opportunities in the global marketplace.

For the first time, several European semiconductor manufacturers, including Philips of the Netherlands, West Germany's Siemens, SGS-Ates of Italy and France's Thomson, have committed themselves to substantial investments in the development and production of mass-produced microchips, a business which most of them have hitherto shied away from because of the high level of risk.

In the computer industry, Olivetti of Italy and West Germany's Nixdorf are both bent on ambitious expansion in the U.S. and the Far East. The former has concluded a string of marketing and production agreements with partners including American Telephone and Telegraph, Xerox and Toshiba.

Tougher market conditions are also prompting European electronics companies, which have for decades remained at arms length from each other, to seek closer collaboration. The larger ones are all members of Esprit, the EEC-sponsored programme of advanced research in information technology.

Separately, Britain's ICL, France's Bull and Siemens have established a joint laboratory to work on computer artificial intelligence. The EEC's four largest telecommunications companies, Siemens, Cit-Alcatel of France, Plessey of Britain and Italtel of Italy, are also working together on the development of some common components for public exchanges.

All of these moves reflect in varying degrees a recognition that unless Europe's electronics industry makes a sustained effort to catch up with U.S. and Japan, it risks losing its positions in established markets and being locked out of opportunities in new ones.

The dangers which Europe faces were clearly underlined earlier this month by the Paris-based Organisation for Economic Cooperation and Development (OECD) in its latest Economic Outlook. It stated:

"Despite considerable government interest in and encouragement of high technology in Europe over the years, its trade balance appears to be on a secular downward trend. Were these trends to continue, Europe would increasingly tend to become a net supplier to the rest of the world of food and raw materials and low technology manufactured goods, areas where competition from non-OECD countries (and certain non-European OECD countries) can be expected to become fiercer."

In semiconductors, European-owned manufacturers' share of the world market has been in steady decline for more than a decade, falling to a mere 8.5 per cent last year. Their share of the market for microchips was even smaller, only 6.7 per cent, according to Dataquest.

In computers, the Europeans' position is equally weak. ICL, Siemens and Bull, the three indigenous mainframe manufacturers, had combined sales of about $7bn last year, less than one-sixth of the worldwide sales of IBM, the industry leader. Only Olivetti is seriously trying to compete on a Europe-wide basis against the dominant position which IBM has acquired in personal computers in the past three years.

In telecommunications, Europe appears at first sight to be stronger. It has almost a dozen public exchange manufacturers (if ITT's local subsidiaries, and AT&T and Philips are included) and the EEC overall has enjoyed a surplus in telecommunications trade.

But the underlying position is much weaker than it looks. Europe's compartmentalised national markets no longer provide the economies of scale needed to absorb the huge costs of developing modern digital equipment. Furthermore, few European companies have kept pace with the U.S. and Japanese leaders in the development of advanced customer terminal equipment.

About three-quarters of the European telecommunications industry's sales are to national monopoly administrations. Critics charge that some of the manufacturers have grown sleepy in the absence of competition, and that they would be rudely swept aside by U.S. and Japanese companies if Europe's markets were ever opened up.

Struggle

In consumer electronics, Europe is struggling to hold the ring against Japan and other Far Eastern rivals, in spite of a succession of recent rationalisation moves which were supposed to improve economies of production scale. The two leading companies, Philips and Thomson, both lost money last year, and Thomson says it cannot hope to survive without extensive trade protection.

Equally disturbing is Europe's position in the application of electronics, where the picture is at best mixed. In some country, notably West Germany, Switzerland and Sweden, traditional engineering industries are now adapting from mechanical to electronic technology quite fast. Britain, moverover, has seen the emergence of a crop of high-technology "start-up" companies in the past few years.

Overall, however, Europe suffers a serious lag. The U.S. and Japan respectively sell the EEC three and five times more computer equipment and electrical goods than they buy from it and use between four and five times more silicon chips per head of population.

Europe, nonetheless, retains some outstanding centres of

CONTINUED ON NEXT PAGE

IN THIS SURVEY

CURRENCIES, MONEY and CAPITAL MARKETS

FOREIGN EXCHANGES

GNP proves good for dollar

BY COLIN MILLHAM

The flash estimate of U.S. second quarter gross national product overhung the foreign exchanges throughout last week. The dollar fell to a low of DM 2.9950 on Wednesday as forecasts for GNP growth suggested a figure of little more than 1 per cent. This was nearly the lowest level for the dollar against the D-mark this year, but it rebounded quite strongly, and a fall below DM 2.9750 may have been necessary before the currency showed much danger of entering a new and lower trading range.

Rumours began in the U.S. late on Wednesday that the earlier forecasts for GNP were too pessimistic, and by Thursday morning covering of short positions was leading to a general dollar recovery. The published figure of 3.1 per cent growth during the quarter was above even the most optimistic forecasts, but was in itself only an estimate, and may well be revised in future weeks.

It will not be lost on the market that at the same time as the announcement about the second quarter, the figure for the first three months of the year was revised down to 0.3 per cent growth from 0.7 per cent.

It was nonetheless a much better close to the week as far as the dollar was concerned. The rise of only 0.2 per cent in May U.S. consumer prices was encouraging for the economy, and the Federal funds rate in New York returned to levels above 7 per cent. A cut of ½ per cent to 7 per cent in the Federal Reserves discount rate may not have been averted, but only delayed for a short time.

Until Thursday's figure was published there had been an assumption the Federal Reserve would cut its discount rate, to weaken the dollar, and stimulate growth in a stagnating economy. This is now no longer certain, and until the rate is cut, or there is more evidence on the economy, the dollar seems likely to remain within a trading range of DM 3.00 to DM 3.15. On Friday it finishd at DM 3.0645 compared with DM 3.0565 at the end of the previous week, while sterling, which briefly touched its highest level for nearly a year of well over $1.30 closed little changed at $1.2875 against $1.2810.

STERLING INDEX

	June 21	Previous
8.30 am	79.9	80.4
9.00 am	79.9	80.4
10.00 am	80.0	80.5
11.00 am	79.9	80.5
Noon	79.8	80.5
1.00 pm	79.8	80.5
2.00 pm	79.9	80.1
3.00 pm	79.9	79.6
4.00 pm	80.0	79.8

£ IN NEW YORK

	June 21	Prev. close
£ Spot	$1.2860-1.2870	$1.2775-1.2585
1 month	0.55-0.54 pm	0.55-0.54 pm
3 months	1.49-1.47 pm	1.49-1.46 pm
12 months	4.15-4.05 pm	4.15-4.05 pm

Forward premiums and discounts apply to the U.S. dollar

FORWARD RATES AGAINST STERLING

	Spot	1-month	3-month	6-month	12-month
Dollar	1.2875	1.2822	1.2729	1.2625	1.2473
D-Mark	3.9450	3.9221	3.8778	3.8203	3.7228
French Franc	12.0350	12.0126	11.9819	11.9676	11.9569
Swiss Franc	3.3025	3.2829	3.2458	3.1944	3.1045
Japanese Yen	319.50	317.84	314.76	310.78	303.53

BANK OF ENGLAND TREASURY BILL TENDER

	June 7	June 14		June 7	June 14
Bills on offer	£100m	£100m	Top Accepted rate of discount.	11.9327	11.8324%
Total of applications	£379m	£364m	Average rate of discount	11.9171	11.8224%
Total allocated	£100m	£100m	Average yield	12.28	12.18%
Minimum accepted bid	£97.025	£97.05%	Amount on offer at next tender	£100m	£100m
Allotment at minimum level	41%	92%			

POUND SPOT—FORWARD AGAINST POUND

June 21	Day's spread	Close	One month	% p.a.	Three months	% p.a.
U.S.	1.2720-1.2895	1.2870-1.2880	0.56-0.53c pm	5.12	1.50-1.45pm	4.62
Canada	1.7380-1.7560	1.7520-1.7555	0.44-0.46c pm	3.08	1.20-1.07pm	2.60
Nethlnd.	4.40-4.50	4.40-4.50	2¼-2c pm	5.73	6½-5⅝pm	5.45
Belgium	79.06-79.60	79.50-79.60	28-23c pm	3.84	77-68pm	3.65
Denmark	14.101-14.177	14.17¼-14.17¾	3⅛-2⅞ore pm	2.54	9½-8½pm	2.53
Ireland	1.2530-1.2595	1.2545-1.2555	0.19-0.08p pm	1.28	0.43-0.25pm	1.08
W. Ger.	3.9198-2.9455	3.9445-3.9455	2½-2¼pf pm	6.84	6⅝-6¼pm	6.59
Portugal	222.90-228.10	224.61-228.09	185-545c dis	−19.35	555-1575dis	−14.40
Spain	224.20-225.60	225.06-225.38	30-60c dis	−2.40	125-180dis	−2.71
Italy	2,503-2,520	2,518-2,520	par-4 lire dis	−0.95	7-12dis	−0.15
Norway	11.27½-11.36¾	11.36½-11.38¼	⅛ pm-⅛ore dis	−0.28	¼pm-⅛dis	0.10
France	11.956-12.065	12.034-12.055	2⅝-2c pm	2.30	6-5pm	1.82
Sweden	11.27½-11.38¼	11.37¾-11.38¼	3½-4ore dis	−3.89	10⅞-11⅞dis	−3.95
Japan	316½-319¾	319¾-319¾	1.77-1.62y pm	6.40	4.87-4.66pm	6.00
Austria	27.60-27.72	27.64-27.68	14½-12⅝gro pm	5.91	39½-35⅞pm	5.40
Switz.	3.2665-2.3030	3.3020-3.3030	2⅛-1⅞c pm	7.27	5⅞-5¼pm	6.89

Belgian rate is for convertible francs. Financial franc 80.35-80.45. Six-month forward dollar 2.59-2.54c pm. 12-month 4.20-4.05 pm.

DOLLAR SPOT—FORWARD AGAINST DOLLAR

June 21	Day's spread	Close	One month	% p.a.	Three months	% p.a.
UK†	1.2720-1.2895	1.2870-1.2880	0.56-0.53c pm	5.12	1.50-1.45pm	4.62
Ireland†	1.0130-1.0230	1.0218-1.0226	0.35-0.30c pm	3.84	0.95-0.85pm	3.54
Canada	1.3643-1.3663	1.3650-1.3660	0.26-0.29c dis	−2.41	0.67-0.72dis	−2.04
Nethlnd.	3.4490-3.4870	3.4545-3.4555	0.23-0.20c pm	0.74	0.82-0.78pm	0.92
Belgium	61.65-62.28	61.70-61.80	5½-6½c dis	−1.16	16-18½dis	−1.11
Denmark	11.000-11.030	11.012-11.013	1⅞-2⅛ore dis	−2.17	4⅛-4⅞dis	−1.62
W. Ger.	3.0590-3.0900	3.0640-3.0650	0.50-0.45pf pm	1.85	1.66-1.61pm	2.12
Portugal	175¾-177¼	175¾-177¼	225-500c dis	−24.65	650-1450dis	−23.80
Spain	174.75-176.85	174.75-175.50	100-115c dis	−7.31	330-370dis	−7.93
Italy	1,954-1,972	1,955¼-1,955¾	10¼-11 lire dis	−0.48	31-32dis	−6.40
Norway	8.8150-8.8540	8.8245-8.8255	3¼-3¾ore dis	−4.74	10¼-10¾dis	−4.74
France	9.3500-9.4260	9.3445-9.3455	2.20-2.35c dis	−2.90	6.50-6.80dis	−2.83
Sweden	8.8395-8.8455	8.8445-8.8455	6¼-6¾ore dis	−8.79	19-19½dis	−8.68
Japan	247.90-248.70	248.05-248.15	0.29-0.25y pm	1.30	0.88-0.83pm	1.37
Austria	21.50-21.71	21.50-21.55	2-1½gro pm	0.89	5½-3¾pm	0.83
Switz.	2.5550-2.5810	2.5620-2.5630	0.50-0.46c pm	2.23	1.55-1.48pm	2.36

† UK and Ireland are quoted in U.S. currency. Forward premiums and discounts apply to the U.S. dollar and not to the individual currency. Belgian rate is for convertible francs. Financial franc 62.40-62.50.

OTHER CURRENCIES

June 21	£	$		£ Note Rates
Argentina Peso	N/A	N/A	Austria	27.50-27.80
Australia Dollar	1.9140-1.9180	1.5008-1.5030	Belgium	79.25-80.05
Brazil Cruzeiro	7,442-7,471	5,830-5,850	Denmark	14.05-14.19
Finland Markka	8.1504-8.1824	6.3170-6.3190	France	11.93-12.05
Greek Drachma	172.34-176.10	135.55-136.17	Germany	3.91½-3.94½
Hong Kong Dollar	9.9360-9.9460	7.7660-7.7680	Italy	2490-2525
Iran Rial	118.50*	92.25*	Japan	317-321
Kuwait Dinar (KD)	0.3880-0.3885	0.30325-0.30340	Netherlands	4.42-4.46
Luxembourg Fr	80.35-80.45	62.40-62.50	Norway	11.23-11.33
Malaysia Dollar	314.60-315.10	2.4590-2.4620	Portugal	217-227
New Zealand Dlr.	2.7305-2.7385	2.1415-2.1245	Spain	217½-227
Saudi Arab Riyal	4.6714-4.6763	3.6510-3.6520	Sweden	11.25-11.36
Singapore Dollar	2.8545-2.8595	2.2320-2.2340	Switzerland	3.27-3.30
Sth African Rand	2.5065-2.5183	1.9665-1.9704	United States	1.26½-1.28½
U.A.E. Dirham	4.6983-4.7032	3.6720-3.6730	Yugoslavia	345-370

* Selling rate.

EMS EUROPEAN CURRENCY UNIT RATES

	Ecu central rates	Currency amounts against Ecu June 21	% change from central rate	% change adjusted for divergence	Divergence limit %
Belgian franc	44.9008	45.2489	+0.78	+0.88	±1.5471
Danish krone	8.14104	8.06059	−0.99	−0.89	±1.6419
German D-mark	2.24184	2.24567	+0.17	+0.27	±1.1475
French franc	6.87456	6.84720	−0.40	−0.30	±1.3689
Dutch guilder	2.52595	2.53122	+0.21	+0.31	±1.5171
Irish punt	0.72569	0.716774	−1.23	−1.13	±1.6673
Italian lira	1403.49	1432.28	+2.06	+2.05	±4.0410

Changes are for Ecu, therefore positive change denotes a weak currency. Adjustment calculated by Financial Times.

CURRENCY MOVEMENTS

June 21	Bank of England Index	Morgan Guaranty Change %
Sterling	80.0	−9.1
U.S. dollar	145.1	+30.3
Canadian dollar	87.9	−6.8
Austrian schilling	111.5	+2.9
Belgian franc	89.1	−11.7
Danish Kroner	77.5	−6.3
Deutsche mark	121.7	+6.6
Swiss franc	140.4	+8.1
Guilder	112.3	+3.2
French franc	64.9	−15.5
Lira	45.3	−17.1
Yen	156.4	+18.5

Morgan Guaranty changes: average 1980-1982=100. Bank of England Index (base average 1975=100).

CURRENCY RATES

June 21	Bank rate %	Special Drawing Rights	European Currency Unit
Sterling	—	0.780749	0.571337
U.S. $	7½	0.995065	0.727884
Canadian $	9.57	*	0.993707
Austria Sch.	4½	21.5919	15.7951
Belgian Fr.	9¼	61.8010	45.2489
Danish Kr.	7	11.0198	8.06059
Dmark	4½	3.06918	2.24567
Guilder	5½	N A	2.53122
French Fr.	9½	9.35859	6.84720
Lira	15½	1958.01	1432.28
Yen	5	247.373	181.003
Norway Kr.	8	8.8083	6.44177
Span'h Pta.	—	175.679	128.508
Swedish K.	11.5	N A	6.46361
Swiss Fr.	4	2.56448	1.87721
Greek Dr'ch	20½	136.413	99.6109
Irish Punt	13¾	0.979877	0.716774

* C$/SDR rate for June 19. 1.37116

EXCHANGE CROSS RATES

June 21	Pound St'rling	U.S. Dollar	Deutschem'k	J'panese Yen	French Franc	Swiss Franc	Dutch Guild	Italian Lira	Canada Dollar	Belgian Franc
Pound Sterling	1.	1.288	3.945	319.5	12.04	3.303	4.450	2519.	1.754	79.55
U.S. Dollar	0.777	1.	3.064	248.2	9.348	2.565	3.456	1957.	1.362	61.79
Deutschemark	0.253	0.326	1.	80.99	3.051	0.837	1.128	638.5	0.445	20.16
Japanese Yen 1,000	3.130	4.030	12.35	1000.	37.67	10.34	13.93	7884.	5.489	249.0
French Franc 10	0.831	1.070	3.278	265.5	10.	2.744	3.698	2093.	1.457	66.10
Swiss Franc	0.303	0.390	1.195	96.74	3.644	1.	1.347	762.8	0.531	24.09
Dutch Guilder	0.225	0.289	0.887	71.80	2.704	0.742	1.	566.1	0.394	17.88
Italian Lira 1000	0.397	0.511	1.566	126.8	4.778	1.311	1.767	1000.	0.696	31.58
Canadian Dollar	0.570	0.734	2.249	182.2	6.862	1.883	2.537	1436	1.	45.36
Belgian Franc 100	1.257	1.618	4.959	401.6	15.13	4.151	5.594	3167.	2.205	100.

EURO-CURRENCY INTEREST RATES (Market closing rates)

June 21	Sterling	U.S. Dollar	Canadian Dollar	Dutch Guilder	Swiss Franc	D-mark	French Franc	Italian Lira	Belgian Franc Conv.	Belgian Franc Fin.	Yen	Danish Krone
Short-term	12⅝-12⅞	7⅛-7½	9½-9¾	6¾-7	⅞-1⅛	5½-5⅝	10⅛-10¼	13½-14½	8½-8¾	8½-8¾	6-6⅛	9½-10⅛
7 days' notice	12¾-13	7⅝-7½	9½-9¾	6½-7	14¾-15	5⅜-5⅝	10⅛-10¼	13½-14½	8½-8¾	8½-8¾	6⅛-6⅛	9⅞-10⅛
Month	12⅝-12¾	7⅛-7⅜	9½-9¾	6¾-6⅞	5⅛-5⅝	6½-5⅝	10⅛-10⅛	13⅞-14⅜	8⅝-8⅞	8⅝-8⅞	6⅛-6⅛	9⅞-10⅛
Three months	12½-12⅝	7⅛-7⅛	9⅛-9⅛	6⅝-6¾	5⅛-5⅛	5½-5⅝	10¼-10⅛	13¾-14¼	8⅝-8⅞	8⅝-8⅞	6⅛-6⅛	9½-10
Six months	12⅛-12¼	7⅞-8⅛	9⅛-9⅛	6⅞-6⅞	5⅛-5⅛	5½-5⅝	10⅛-10⅛	14-14⅜	8⅝-8⅞	8⅝-8⅞	6⅛-6⅜	9¼-9¾
One year	12-12⅛	8⅛-8⅜	9⅛-9⅛	6⅞-6⅞	5⅛-5¼	5⅝-5¾	11-11⅛	14¼-14⅜	9⅛-9⅜	9-9¼	6⅛-6⅜	9½-9¾

Asian $ (closing rates in Singapore): Short-term 7⅜-7½ per cent; seven days 7⅜-7½ per cent; one months 7⅞-7⅞ per cent; three month 7½-7⅝ per cent; six months 7⅞-7⅞ per cent; one year 8⅛-8⅞ per cent. Long-term Eurodollars: two years 9-9¼ per cent; three years 9½-9⅝ per cent; four years 9⅞-10⅛ per cent; five years 10⅛-10⅜ per cent nominal. Short-term rates are call for U.S. dollars and Japanese yen; others two days' notice.

MONEY MARKETS

A disappointing week

It was a disappointing week as far as the money markets were concerned. By mid-week hopes had built up of a cut in the *Federal Reserve's discount rate* by ½ per cent to 7 per cent. The major U.S. banks had already cut their prime rates by ½ per cent to 9½ per cent, and the central bank was not intervening aggressively in the domestic money market. The Fed drained reserves from the New York banking system on Tuesday and Wednesday through matched sales, but only when the Federal funds rate was below 7 per cent. This, coupled with expectations the authorities would be virtually obliged to add some stimulus to the U.S. economy because the flash estimate of second-quarter GNP was going to show further stagnation, led to suggestions it was 95 per cent certain the discount rate would be cut on Friday.

It is now considered less than certain the Fed will act this week, after a much higher rise in *GNP than was generally forecast.*

UK clearing banks base lending rate 12½ per cent since June 12

The Bank of England has been consistently cautious about any lowering of UK rates, but at one time last week an impetus was *growing for a cut in bank base* rates. As events across the Atlantic appeared to be building up for a cut in the U.S. discount rate, discount houses in London became reluctant sellers of high yielding paper. But by Friday the houses were again willing sellers of bills, and wholesale money rates moved higher as sterling gave up its earlier gains against the dollar.

Only in Germany was there any specific suggestion that the central bank wanted to see lower domestic interest rates. The Bundesbank kept its discount and Lombard rates unchanged at the regular council meeting, but cut the rate on three-day Treasury bills. This was seen as an encouragement to reduce the rate charged on call money in the market, and at the same time the Bundesbank president told a press conference that present policy is to foster a lower tendency in German rates.

MONEY RATES

June 21	Frankfurt	Paris	Zurich	Amst'dam	Tokyo	Milan	Brussels	Dublin
Overnight	5.45-5.55	10⅛	⅞-1⅛	6⅞-7	6.09375	14¾-15¼	9.70	11¾-12
One month	5.40-5.56	10⅛-10⅜	5⅛-5¼	6⅛-6⅜	6.21875	14¼-14⅝	8⅝-8⅞	11¾-12
Two months	5.50-5.65	10⅛-10⅜	—	—	—	—	—	11¾-12
Three months	6.55-5.70	10¼-10⅝	5⅛-5⅜	6⅛-6⅝	6.28125	14⅞-15¼	8⅝-8⅞	11¾-12
Six months	5.6-5.75	10⅜-10½	—	6½-6⅝	—	—	8⅝-8⅞	11¾-12
Lombard	6.0	—	—	—	—	—	—	—
Intervention	—	10⅛	—	6⅝	—	—	—	—

LONDON MONEY RATES — Discount Houses Deposit and Bill Rates

June, 21 1985	Sterling Certificate of deposit	Interbank	Local Authority deposits	Company Deposits	Market Deposits	Treasury (Buy)	Treasury (Sell)	Eligible Bank (Buy)	Eligible Bank (Sell)	Fine Trade (Buy)
Overnight	—	12-13½	12⅝-12¾	12¾-12⅞	11-12½	—	—	—	—	—
2 days notice	—	—	12⅝	—	—	—	—	—	—	—
7 days or	—	—	—	—	—	—	—	—	—	—
7 days notice	—	12⅝-12⅞	12⅝	12⅞	12½-12¾	—	—	—	—	—
One month	12⅞-12¾	12⅝-12¾	12⅞	12⅞	12⅝	12⅛	12½	12⅜	12½	12⅞
Two months	12⅜-12⅛	12½-12⅝	12½	12¾	12⅛	12⅛	12	12⅛	12⅜	12¾
Three months	12⅜-12⅛	12⅝-12¼	12½	12⅝	11⅞	11⅞	11⅞	11⅞	11⅞	12⅜
Six months	12⅛-12	12⅛-12⅛	12⅛	—	—	—	—	11⅞	11⅞	11⅞
Nine months	11⅞-11⅞	12-12⅛	—	—	—	—	—	—	—	—
One year	11⅞-11¾	11⅞-12⅛	11⅞	—	—	—	—	—	—	—

	Local Auth. negotiable bonds	Local Authority Deposits	Finance House Deposits	$ Cert of Deposits	SDR Linked Deposits	ECU Linked Deposits
One month	13⅛-12⅞	—	12⅛	7.4-7.5	7⅝-7⅞	9⅞-9⅞
Two months	12⅞-12⅝	—	12½	7.45-7.55	7⅞-7⅞	9⅞-9⅞
Three months	12⅞-12⅝	—	12⅜	7.55-7.65	7⅞-7⅞	9⅞-9⅞
Six months	12⅞-12⅝	—	12¾	7.85-7.95	7⅞-8⅛	9⅞-9⅞
Nine months	12½-12¼	—	12⅛	8.1-8.2	—	—
One year	12¼-12	—	11⅞	8.35-8.35	8⅛-8⅜	9⅞-9⅞
Two years	—	11⅝	—	—	—	—
Three years	—	11½	—	—	—	—
Four years	—	11½	—	—	—	—
Five years	—	11¾	—	—	—	—

ECGD Fixed Rate Finance IV: Average Rate of interest period May 8 to June 4 (inclusive): 12.677 per cent. Local authority and finance houses seven days notice, others seven days' fixed. Finance Houses Base Rate (published by the Finance Houses Association): 13 per cent from June 1, 1985. London and Scottish Clearing Bank Rates for lending 12½ per cent. Bank Deposit Rates for sums at seven days' notice 6.65-6.75 per cent (net). Treasury Bills: Average tender rate of discount 11.9171 per cent. Certificates of Tax Deposits (Series 6): Deposits £100,000 and over held under one month 12½ per cent; one-three *months 12¼ per cent; three-six months 12 per cent; six-nine months 11¾ per* cent; nine-12 months 11½ per cent. Under £100,000 11¼ per cent from June 20. Deposits held under Series 5 11¾ per cent. The rate for all deposits withdrawn for cash 8 per cent.

FT LONDON INTERBANK FIXING

(11.00 a.m. June 21)

Three months U.S. dollars

bid 7 9/16 — offer 7 11/16

Six months U.S. dollars

bid 7 13/16 — offer 7 15/16

The fixing rates are the arithmetic means, rounded to the nearest one sixteenth, of the bid and offered rates for $10m quoted by the market to five reference banks at 11 a.m. each working day. *The banks are National* Westminster Bank, Bank of Tokyo, Deutsche Bank, Banque Nationale de Paris and Morgan Guaranty Trust.

MONEY RATES

NEW YORK (4 pm)

Prime rate	9½
Broken loan rate	8
Fed funds	7⅞
Fed funds at intervention	(—)

Treasury Bills

One month	6.40
Two month	6.85
Six month	7.02
Three month	7.22
One year	7.37

Treasury Bonds

Two year	99⅞
Three year	102¼
Four year	105⅝
Five year	100¹¹⁄₃₂
Seven year	107¼
10 year	105¹¹⁄₁₆
30 year	106⅝

FINANCIAL FUTURES

LONDON

THREE-MONTH EURODOLLAR $1m points of 100%

	Close	High	Low	Prev
Sept	91.81	91.90	91.77	92.08
Dec	91.32	91.42	91.29	91.61
March	90.92	91.01	90.87	91.19
June	90.58	90.63	90.57	90.83
Sept	90.28	—	—	90.52

Est volume 7,081 (6,472)
Previous day's open int — (19,497)

THREE-MONTH STERLING £500,000 points of 100%

	Close	High	Low	Prev
Sept	88.35	88.40	88.30	88.46
Dec	88.78	88.79	88.74	88.88
March	88.84	88.84	88.80	88.91
June	88.90	88.94	88.90	88.97
Sept	89.00	—	—	—

Est volume 1,868 (1,516)
Previous day's open int — (7,367)

20-YEAR 12% NOTIONAL GILT £50,000 32nds of 100%

	Close	High	Low	Prev
June	106-21	—	—	106.27
Sept	110-11	110-15	110-08	110-11
Dec	110-26	—	—	110-31
March	110-02	—	—	111.08

Est volume 1,234 (1,776)
Previous day's open int — (3,923)
Basis quote (clean cash price of 13¾% Treasury 2003 less equivalent price of near futures contract) −26 to −15 (32nds)

STERLING £25,000 $ per £

	Close	High	Low	Prev
Sept	1.2700	1.2675	1.2615	1.2640
Dec	1.2580	1.2512	1.2500	1.2515
March	1.2505	1.2430	1.2430	1.2415

Est volume 473 (223)
Previous day's open int — (9,888)

DEUTSCHE MARKS DM 125,000 $ per DM

	Close	High	Low	Prev
Sept	32.76	32.78	32.50	32.60

Est volume 547 (140)
Previous day's open int (235)

SWISS FRANCS SwFr 125,000 $ per SwFr

	Close	High	Low	Prev
Sept	39.25	—	—	39.05

Est volume nil (10)
Previous day's open itn — (179)

JAPANESE YEN Y12.5m $ per Y100

	Close	High	Low	Prev
Sept	40.39	40.39	40.38	40.38

Est volume 200 (3)
Previous day's open int — (149)

FT-SE 100 INDEX £25 per full index point

	Close	High	Low	Prev
June	126.60	127.60	126.50	127.95
June	126.60	127.60	126.50	127.95
Sept	127.00	127.80	126.75	128.25

Est volume 871 (486)
Previous day's open int — (1,564)

U.S. TREASURY BONDS 8% $100,000 32nds of 100%

	Close	High	Low	Prev
Sept	76-00	76-28	76-00	77-09
Dec	74-31	75-03	74-31	76-07
March	73-31	74-06	73-31	75-06

Est volume 2,664 (2,430)
Previous day's open int — (2,181)

CHICAGO

U.S. TREASURY BONDS (CBT) 8% $100,000 32nds of 100%

	Close	High	Low	Prev
Sept	76-04	76-20	75-20	77-02
Dec	75-03	75-18	74-19	76-00
March	74-50	74-19	73-24	75-00
June	70-07	70-15	69-31	70-29
Sept	72.14	72-22	72-03	73-06
Dec	71-21	71-29	71-09	72-12
March	70-29	71-06	70-18	71-20
June	70-07	70-15	69-31	70-29
Sept	—	—	—	—
Dec	69-01	—	—	69-20
March	68-16	68-25	68-06	69.01

U.S. TREASURY BILLS (IMM) $1m points of 100%

	Close	High	Low	Prev
Sept	92.70	92.82	92.65	92.94
Dec	92.38	92.46	92.33	92.59
March	92.02	92.13	91.97	92.25
June	91.74	91.76	91.71	91.95
Sept	91.51	91.54	91.47	91.69
Dec	91.30	91.33	91.30	91.45
March	91.13	91.12	91.05	91.23
June	90.96	90.94	90.87	91.04

CERT DEPOSIT (IMM) $1m points of 100%

	Close	High	Low	Prev
June	92.55	92.66	92.55	92.70
Sept	92.08	92.18	92.03	92.33
Dec	91.61	91.65	91.60	91.87
March	91.21	91.31	91.22	91.45

THREE-MONTH EURODOLLAR (IMM) $1m points of 100%

	Close	High	Low	Prev
Sept	91.77	91.88	91.70	92.02
Dec	91.29	91.40	91.23	91.55
March	90.89	90.97	90.84	91.13
June	90.56	90.65	90.52	90.78
Sept	90.28	90.32	90.25	90.48
Dec	90.02	90.08	89.99	90.20
March	89.77	89.84	89.75	89.94
June	89.54	89.60	89.54	89.70

STERLING (IMM) Se per £

	Close	High	Low	Prev
Sept	1.2730	1.2780	1.2595	1.2645
Dec	1.2625	1.2655	1.2495	1.2549
March	—	—	—	1.2250
June	1.2475	1.2330	1.2315	1.2390

GNMA (CBT) 8% $100,000 32nds of 100%

	Close	High	Low	Prev
Sept	75-03	75-08	74-21	75-16
Dec	74-11	74-11	74-00	74-24
March	—	—	—	—
June	73-10	73-10	73-03	73-23
Sept	72-30	73.24	73-11	73-11

WEEKLY CHANGE IN WORLD INTEREST RATES

	June 14	change		June 14	change
LONDON			**NEW YORK**		
Base rates	12½	Unch'd	Prime rates	9½	−½
7 day Interbank	12¾	+¼	Federal funds	7⅝	+⅛
3mth Interbank	12⅛	+⅛	3 Mth. Treasury Bills	6.98	+0.27
Treasury Bill Tender	11.9171	+0.0947	*6 Mth. Treasury Bills*	7.24	+0.38
Band 1 Bills	12⅜	Unch'd	3 Mth. C D	7.50	Unch'd
Band 2 Bills	12¼	Unch'd			
Band 3 Bills	12⅛	Unch'd	**FRANKFURT**		
Band 4 Bills	12	Unch'd	Lombard	6.0	Unch'd
3 Mth. Treasury Bills	11⅞	+⅛	One Mth. Interbank	5.475	−0.075
1 Mth. Bank Bills	12⅜	+⅛	Three month	5.625	Unch'd
3 Mth. Bank Bills	11⅞	Unch'd			
			PARIS		
TOKYO			Intervention Rate	10⅛	Unch'd
One month Bills	6.21875	Unch'd	One Mth. Interbank	10¼	+⅛
Three month *Bills*	6.28125	Unch'd	Three month	10⅛	+⅛
BRUSSELS			**MILAN**		
One month	8⅝	−⅛	One month	14⅞	−⅜
Three month	8¾	−⅛	Three month	15⅛	−⅛
AMSTERDAM			**DUBLIN**		
One month	6¾	−⅛	One month	11⅞	−⅞
Three month	6⅝	−⅛	Three month	11⅞	−⅝

London—band 1 bills mature in up to 14 days, band 2 bills 15 to 33 days, band 2 bills 34 to 63 days and band 4 bills 64 to 91 days. Rates quoted represent Bank of England buying or selling rates with the money market. In other centres rates are generally deposit rates in the domestic money market and their respective changes during the week.

Producers pin hopes on new alliances

Computer manufacture

ALAN CANE

ONLY ONE European electronics company, Siemens AG of West Germany, made the top 10 in the U.S. magazine Datamation's list of the world's leading data processing companies, published this month—and it was placed 10th.

Three others, Olivetti of Italy (13), Groupe Bull of France (16) and ICL of the UK (20) were in the top 20. A few more Europeans — Nixdorf, L. M. Ericsson, Philips and Triumph Adler were among them—are scattered through a list which is otherwise a testimonial to the strength of the U.S. data processing industry.

Even the powerful Japanese electronics companies only claimed eight places in the top 100.

Present trends in the European computer industry suggest there can be little significant change in this situation in the short term.

Most of the hopes in the 1960s and 1970s of establishing strong, independent and dominant national champions seem to have evaporated. The UK's ICL (now a subsidiary of STC), for example, brought back from the brink of disaster five years ago by careful housekeeping and prudent marketing, is now dependent to a large extent on technological collaboration with Fujitsu of Japan.

Fujitsu created some 43 different computer chips to ICL's design to power the UK company's new and sophisticated computer family, the Series 39.

In France, Honeywell of the U.S. still holds a minority stake in Groupe Bull. The company markets large machines manufactured by Honeywell and by NEC of Japan.

In Germany, Siemens, which fabricates advanced silicon chips of its own design as well as building its own computers, depends on Fujitsu for its top-end machines.

Furthermore, most of the most important new commercial ideas in computing are being exploited first in the U.S. and Japan rather than Europe.

A typical example is the development of the so-called fault tolerant computer. Businesses now depend so completely on the integrity of their computers that they cannot tolerate failure of their systems for more than a few hours—in the case of banking applications, a few seconds off the air can cost thousands of dollars.

Most companies have coped, and are still coping, by the labourious and expensive option of installing a second machine with the power turned on ready to take over if the primary system fails, the "hot back-up" option.

A small company: Tandem Computer, in the U.S. decided in the late 1970s that there must be a better way. It designed a machine in which all the essential elements, the processors, memories, storage disks and information paths were duplicated.

High cost

It also wrote complex but effective software designed to switch computing tasks between the various processors and memories in the event of a failure.

It was an expensive solution —Tandem computers typically cost upwards of $200,000—but they gained an enviable reputation for never stopping, and that commended them powerfully in the defence and finan- kets.

There was no real response in Europe to Tandem's success although one or two companies, Computer Technology in the UK is an example, understood the importance of fault tolerance and modified their equipment to provide some of the important elements.

It was left to a second U.S. firm, Stratus, to move fault tolerant technology forward despite the fact that all the essential components were available to European manufacturers.

Tandem essentially attacked the problem through software. Stratus exploited the newer, very powerful and cheap microprocessors which had become available to create a computer in which every computation was carried out by four separate processing units to test for failure in any part of the system.

European responses to the Japanese "Fifth Generation" computer programme has been somewhat more positive. Computers to date have been sequential in their operations; they obey one instruction after another in a fixed sequence. Each instruction is implemented by a single central processing unit which becomes, therefore, a bottleneck which determines the speed of the whole system.

Computer engineers have long reasoned that machine comprising a number of processors operating simultaneously and in co-ordination offered the prospect of significantly greater computing power — power enough, in fact, to create a machine with "intelligence."

Research to create such a parallel processor had been proceeding desultorily in the U.S., the UK and mainland Europe until the late 1970s when the Japanese announced that the development of a "Fifth generation" computer of this kind was to be the object of a major research programme involving a consortium of Fujitsu, Hitachi, Matsushita, Mitsubishi, NEC, OKI Sharp, Toshiba and the Japanese Ministry of International Trade.

The UK was one of the first Western Countries to react to the Japanese initiative. Its response was to commission a report chaired by Mr John Alvey and then to set up an "Alvey" programme of research into fifth generation topics.

The EEC established a programme called Esprit (European Strategic Program of Research and Information Technology) involving collaboration between a number of European companies including Siemens, Groupe Bull and ICL.

Increasingly, European computer companies are looking to collaborative ventures in research and development and in marketing to increase their competitiveness.

The best example is Olivetti, which through a series of imaginative strategic alliances, is beginning to look as if it could be a world power in microcomputers, the only European company which looks likely to do so (although the UK has high hopes of ACT).

Its market share in Europe was 7.9 per cent in 1984 according to the Paris based consultancy Intelligent Electronics (against 27.5 per cent for IBM and 17.9 per cent for Apple, both of the U.S.).

In December 1983, it sealed an alliance with A&T, the U.S. telecommunications giant, through which AT&T tok 25 per cent of the Italian company.

A few weeks ago it announced talks with Xerox selling Olivetti personal computers in America.

Only days ago it announced a new alliance with Toshiba of Japan under which the Japanese company will buy 20 per cent of Olivetti's Japanese subsidiary and the two companies will cooperate in marketing in. marketing in Europe and Asia.

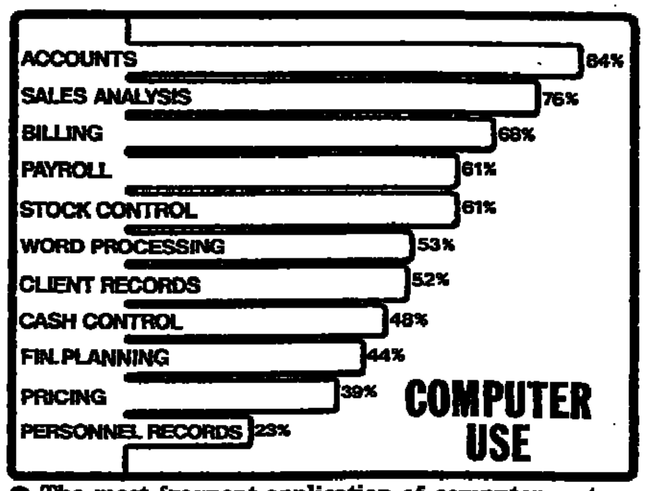
Computing standards are a second line of defence for the beleagured Europeans. In large computers, most European manufacturers support the notion of Open Systems Interconnection (OSI), a set of rules governing computer specifications which means that any computer can easily be attached to any other.

At the moment they certainly cannot. The specifications for OSI are, however, not yet complete.

In the meantime, IBM is continuing to develop its proprietary computer networking system SNA (Systems Network Architecture). Many observers believe that if IBM is allowed to make SNA a de facto, the job of its competitors will be that much harder.

At the microcomputer level, there has recently been great enthusiasm in Europe for an operating system (software which controls the computers internal operations) developed by AT & T, called Unix. Only a few months ago, STC of the UK, Nixdorf and Siemens of West Germany, Olivetti, Philips of the Netherlands and Groupe Bull agreed to co-ordinate development of software for use under Unix.

The suspicion remains that the move is directed against IBM (which chiefly uses an operating system called PC/DOS for its personal computer) rather than because of the virtues inherent in the Unix system.



● The most frequent application of computer systems in the UK is for handling credit and debit accounts, while word processing is, however, the most common application for companies in the financial services sector. The use of computers for personal records is given a very low priority in many sectors of business, according to the findings of a recent survey by the Management Studies Group of Cambridge University's Engineering Department

Microprocessor revenues

● European companies' worldwide microprocessor revenues in 1983-84 in $m.

SGS	$35	46%
Philips	$29	93%
Thomson	$21	110%
Siemens	$19	217%
Matra-Harris	$11	1000%
Total	$115	68%
Top 10 worldwide suppliers ($2.1bn)		

Source: Dataquest

European semiconductor demand

Consumption per capita in US$	1984	1985
Benelux	12.12	12.22
France	12.41	12.71
Italy	8.27	8.09
Scandinavia	17.29	17.88
UK and Eire	20.65	20.76
W. Germany	20.99	21.25
Rest of Europe	6.12	6.15
Total Europe	13.73	13.83
U.S.	55.41	53.25
Japan	66.65	70.03
Rest of world	0.48	0.51
Total world	5.73	5.69

Source: Dataquest, May 1985

Suppliers appeal for imports protection

Consumer electronics

JASON CRISP

EUROPE'S CONSUMER electronics manufacturers are fast developing a siege mentality. The two largest companies — Philips and Thomson — have called for higher tariffs and lower quotas in order to fight a rearguard action against an increasingly successful invasion from the Far East.

Japanese manufacturers which have long feared that the Europeans would increase the protection of their markets have been preparing for such a possibility.

One of the most telling indications of that fear is the fact that there are over 16 Japanese video recorder assembly plants in Europe, but none in the U.S. The European companies grimly note that in any case the U.S. consumer electronics industry has largely been destroyed over the last 15 years.

Philips, the Dutch electricals giant, and Thomson of France, the two largest European consumer electronics companies are leading cries for greater protection. They want an EEC tariff on audio and video products raised to 14 per cent for at least three years.

British companies, led by Thorn EMI, appear to prefer voluntary bilateral agreements with importing countries mainly because of the anomalies which will be caused by quota and tariff measures. In addition, the present British Government is unlikely to favour calls for protectionism.

This would mean raising the differing tariffs on VCRs (8 per cent), hi-fi (4.9 per cent) and video cameras (4.9 per cent) to the same level as colour TVs. Philips has also suggested cuts in tariffs on those products where Europe no longer has any significant production such as film cameras, clock radios and pocket calculators.

In addition there have been a number of calls for a cut in the 17 per cent tariff on semiconductors. (It is argued that semiconductors imported in finished goods attract a lower tariff. European companies which want to compete with similar products often have to import the semiconductors and pay the 17 per cent tariff which makes them less competitive.)

In addition, the companies want to see a 19 per cent tariff on new products. Last year Philips persuaded the EEC to put a 19 per cent tariff on compact disc players, the one new fast growing consumer electronics market. The move unsurprisingly upset the Japanese manufacturers — which complained because Sony had jointly developed Compact Disc technology and standards with Philips.

Even after a substantial restructuring of the industry together with strong demand for consumer electronics in most European markets the indigenous industry has still been struggling. Companies such as Thomson, Philips and Thorn EMI have been trying to stem the losses in their consumer electronics divisions.

The most significant recent changes in the industry have included Philips' acquisitions of Grundig, its long standing West German partner and Thomson purchase of Telefunken, also of West Germany, and Saba and Nordmende.

In Britain many of the leading names in consumer electronics have bowed out since the need of the 1970s. The UK consumer electronics companies tended to be rather insular with few sales overseas. The arrival of reliable, high-quality and low-cost Japanese colour TV sets in the 1970s precipitated a crisis. The UK companies had too-small plants, old designs and a poor reputation for reliability.

Thorn's Ferguson division was the only major British company to make a successful bid to stay in the consumer electronics business. In 1979, Thorn made substantial new investments including the redesign of its sets using far fewer components, cutting its workforce, changing working methods, and installing new line equipment imported from Japan.

Other companies formed close relationships with their Japanese competitors. The idea was that the British companies would benefit from the Japanese designs and manufacturing while the Japanese companies would benefit from UK production facilities. GEC formed a joint venture with Hitachi and Rank teamed up with Toshiba.

But both ventures folded with the British companies withdrawing from the manufacture of colour TVs and their Japanese partners took full control of the plants. Decca, the other main producer of colour TVs, ceased when the company was taken over by Racal which sold the consumer electronics business to Tatung of Taiwan.

European efforts to protect its own video recorder industry have had very mixed results. The EEC and Japan's Ministry of International Trade and Industry (MITI) reached an agreement three years ago which limited the number of VCRs which could be imported into the Community and established a floor price which was related to the European cost of manufacture.

The main object was to give Philips and Grundig a chance to establish V2000 as a credible format and also give them sufficient economies of scale to compete.

Despite the protection V2000 was still a failure. Most other European companies, particularly Thorn EMI in Britain, Telefunken in West Germany and Thomson in France, had backed the VHS format developed and licensed by JVC. The floor price merely served to make consumers pay more for their VCRs and gave the Japanese better margins.

Imports of colour televisions into Europe appears to be comparatively low because of the high level of local production.

More worrying is the high level of imported components. The picture tube is by far the most expensive item in a TV and more than a third are imported from Japan. Its importance will only increase with the introduction of FST (Flatter Squarer Tubes) which are more expensive than conventional tubes.

However, there is little doubt that the loss-making European manufacturers believe they do not have much time in which to save the industry. But governments, keen to see Europe retain an indigenous consumer electronics industry, may not be convinced that protectionism is the solution.

Electronics in Europe 2

No shortage of innovators

Semiconductors

KEVIN TOWNSEND

SUCH IS the domination of world electronic markets by U.S. and Japanese manufacturers that it is easy to forget that Europe — and the UK in particular — could once be considered leaders in semiconductor technology.

The past 10 years, however, have seen a steady and consistent decline in Europe's share of world markets — and yet despite the fact that many believe that European technical ability is second to none.

One reason for the problem, according to Mr Rob Morland, a senior consultant with PA Technology is that Europe will always find difficulty in competing in the very high volume, low unit cost markets. Europe's labour costs are high and its home markets are relatively small. Britain has, however, been among the best innovators and it is this ability that the UK should major on in the future, he says.

Britain's engineering capacity for the conception of new products and architectures, such as the Inmos Transputer, should enable the UK to maintain and improve its current position — though it is the economic and timely exploitation of such ideas which Britain often fails to achieve, he adds.

"We are now beginning to offer exciting new services within the UK, such as direct-write chip fabrication using electron beam and very large scale integration (VLSI) implementations for silicon systems," he says.

These devices include all the components needed to build a system on to a single chip or wafer. Europe in general, and the UK in particular, has the skills to succeed in semiconductors — but do European managers and investors have the vision to exploit those skills before they drift again across the Atlantic?

The implication is clear. Europe could succeed in semiconductor technology, but it would need a combined European "home" market, rather than the existing hybrid and disjointed combination of French, German, British, Nordic and Italian markest.

History shows that this co-operation is unlikely, even though European governments talk passionately on the need for European co-operation. Meanwhile, the larger electronics companies will simply do what they think is best for themselves and their shareholders.

Options

So what choice is left? European manufacturers may either find a niche in the market where volume sales and cheap prices are not the sole criteria—or they can collaborate with foreign competitors.

It is known, for example, that ICL's collaboration with Fujitsu has saved many years of research and development time. And in France, the alliance between Matra and the U.S. company Harris is proving particularly profitable. (Harris is best-known for its CMOS versions of the 8086 and 8088 processors. CMOS technology, with its low-power consumption, is well-suited to the burgeoning portable computer market).

The other choice is to specialise. However, if specialisation is too successful, the result would become a volume requirement, subject to the gravitational pull of the U.S. and the inexorable gaze of the Orient. Telefunken (which has also chosen the collaborative route with Mostek and Thompson CSF) illustrates this point. It claims that two new developments put the company ahead in its own field; a range of surface-mounted LEDs, and special products representing new developments in printer and photocopier assemblies.

This latter development could revolutionise the photocopier and laser printer market —a solid state electro-optic array which removes the need for moving mirrors, lenses, and fixed light sources found in even the latest alternative equipment.

The questions, however, whether the Japanese allow "their" market to be revolutionised from outside — and then, how long can Telefunken retain its leadership in the face of a concerted effort from Japan?

UK companies have a good record for innovative specialisation. One promising example is the application-specific integrated circuit (ASIC). These now provide one of the fastest-growing sectors of the world semiconductor market.

The concept was pioneered in the early 1970s in the UK by Ferranti, and many British and European manufacturers now offer comprehensive ranges of ASIC products easily able to compete with offerings from the U.S. or Japan.

Dr Bob Whelan, managing director of Array Logic, takes a similar view. The constructor of electronics products is rarely limited by the performance of electronic devices, he says, but more by the lack of advanced design techniques required to bring new systems to the market place.

The European systems market, with intermediate volume and potentially a number of local variations, is ideally matched to the new generation of ASICs. Although the gate array potentially offers the systems designer new flexibility in product performance, vendors have not yet come to terms with the need for greater involvement in the system design process.

The emergence of new speciality companies dedicated to the supply of small volume and prototype gate arrays is a new phenomenon. The successful ones among those companies will offer a degree of service and support to the system company not presently available. Dr Whelan believes that there new companies will emerge from the systems companies, not as offshoots from semi-custom vendors.

However, another UK company, Plasma Technology, has boldly claimed that it is poised to make the siliconchip obsolete — a claim based on a process that allows the deposition of high quality amorphous silicon on substrates of up to A4 paper size — compared to the current 6 in diameter available from traditional crystal growth processes.

Incidently, the company recently announced a £500,000 funding from the Alvey Directorate aimed at helping Plasma Technology to develop the next generation of plasma-processing techniques and equipment.

If Plasma Technology succeeds, it would well help our other innovators succeed in their own chosen fields. Sir Clive Sinclair's venture into wafer integration is well-documented, although current optimism must be clouded by the separate problems of Sinclair Research.

Sir Clive is aiming for a billion-component chip by the end of the century, and amorphous silicon deposition may provide the route. However, while it may be a European semiconductor breakthrough that realises this goal, present trends suggest that it will not be European industry that reaps the benefits.

Speaking at the last European Solid State Circuits Conference, Sir Clive commented: "My fear is that we will not be prepared for the demand, and in particular that the British semiconductor industry will fall further behind America and Japan in volume production."

European semiconductor industry

(Figures in $bn)

	1983	1984	1983-84 %
Shipments to	3.4	4.8	42.6
Production in	3.0	4.4	34.9
Production by	1.8	2.4	35.7

● In 1984, European consumption was $4.8bn, up 42.6 per cent.
● Production (factory shipments) in Europe was $4.4bn, up 34.9 per cent in the same year.
● Billings by European-owned companies (worldwide) were $2.4bn, up 35.7 per cent.

Source: Dataquest.

New signs of vulnerability

Telecomms

BOB RAGGETT

TELECOMMUNICATIONS is the only large sector of Europe's electronics industry which has maintained a positive trade balance overall. Increasingly, however, this sector too feels itself to be vulnerable to the sheer muscle of North American industry and what are perceived to be the unfair advantages enjoyed by its Japanese counterpart.

Concern about industry's survival has been expressed by a number of experts, including recently Mr Herbert Ungerer of the European Commission's task force on information technology and telecommunications. Addressing a meeting of the International Telecommunications Users' Group (Intug) in Cologne, Mr Ungerer noted that, while the U.S. had around 39 per cent of world telecommunication sales and Japan nearly 12 per cent, no European Economic Community member state had more than 6 per cent.

"If the present trend continues, by the end of the decade Europe will have a trade imbalance in this sector of $16bn, set against rising positive balances for the USA and Japan," he claimed. Mr Ungerer believes that Europe's current 4m information technology-related jobs are the key to up to 60m in the longer term, and that without a collective change of strategy many of these will be at risk.

Oddly enough, the change over from old-fashioned analogue and electro-mechanical telecommunications equipment to digital and electronic systems is one of the root causes of Europe's vulnerability. Digital systems are not only more compact, reliable and versatile than their analogue predecessors, but they are becoming cheaper to produce since the value added by labour is much smaller.

One consequence is that the maintenance of present levels of employment (or at least, the containment of job losses) which is politically expedient in all the industrialised countries of the world, can only be achieved by increased sales.

Unfortunately, worldwide production capacity for many types of digital telecommunications equipment exceeds demand.

In this context, U.S. and Japanese manufacturers appear to have a number of telling advantages. The former, for example, have the world's biggest and fastest growing domestic market, and the economies of scale, which result from supplying the huge demand which this generates, make most U.S. equipment highly competitive in international markets.

Advantage

The same is true of Japanese equipment. The advantage lies not so much in the size of the domestic market as in the fact that it has traditionally been the exclusive preserve of indigenous suppliers—a situation brought about by natural preference, high tariff barriers, and complex approval and procurement procedures on the part of the national telecommunications administration, Nippon Telegraph and Telephone Corporation. This, coupled with a willingness to pump public money and resources into national commercial enterprises, has had a "hot-house" effect on Japanese industry in the post-war years.

The result is that European manufacturers are witnessing a gradual erosion of their telecommunications market share in overseas countries, with the same consequence threatened for the collective home market. European cultural and linguistic differences and traditional political antagonisms have carried over into the development of telecommunications, a pattern which is not repeated in the U.S. or Japan.

Instead of an homogenous telecommunications system with a single standard against which all indigenous suppliers could manufacture equipment (and so achieve economics of scale), there are nearly as many national variations as there are nations. Worse still, the regional market which, for the most part, had fewer restrictions on overseas entry than Japan, is now opening up dramatically via the liberalisation of traditional telecommunications monopolies.

This process has been most notable in the UK, but is being repeated in other countries, including Norway and Denmark. Italy, Ireland and Greece are among countries which have had fairly liberal policies vis-a-vis equipment purchases for a number of years.

The prospect of its telecommunications industry being overwhelmed by foreign competition has lent urgency to the European desire for collaborative telecommunications research projects—as exemplified by the Esprit and RACE programmes—and its quest for common standards.

The belief is that joint ventures and the adoption of European standards would act as a catalyst for the expansion of the region's telecommunications and informatics markets, and provide a previously missing degree of certainty for European industry and investment. With the creation of a Community—or region-wide market, this industry could achieve the economies of scale and the international competitiveness presently possessed by U.S. industry.

An associated strategy would be to allow access to the European market on a reciprocal basis. This would be designed to redress the enormous imbalance in trade with Japan, an imbalance which could get considerably worse if Japanese access to U.S. markets is itself restricted and the attentions of NEC, Matsushita and Fujitsu among others shift across the Atlantic. In this proposal, failure to achieve reciprocity would result in exclusion of Japanese telecommunications products from Europe.

The translation of these pan-European ideals into any of their possible concrete forms is likely to be far from easy. The sums of money which governments are prepared to subscribe for joint ventures and collaborative research are small. European manufacturers themselves are as keen on U.S. and Japanese alliances as on tie-ups with partners nearer to hand.

At the same time, there is a (perhaps unavoidable) tendency to identfy the national interest with the collective good. That the French were enraged when the UK failed to short-list any EEC telephone systems to instal alongside the home-grown System X probably says as much about the over-capacity of France's manufacturers as it does about BT's supposed lack of Community spirit.

The progress towards pan-European standards has also been rather chequered. While regional compliance with the main outlines of new standards is usual, so too are individual modifications to fit in with different national systems and operational philosophies.

On other occasions, political aspirations and/or commercial convenience hold sway. Once again the French were angered when the UK declined to collaborate with them and the West Germans on a common cellular radio system, electing instead to use modified U.S. technology.

Meanwhile, what is the place of international and multinational enterprises in the pan-European solution? Nippon Electric claims to be Europe's biggest non-indigenous hi-tech investor with nineteen local sales, service and manufacturing establishments, and IBM is actually the UK's sixth biggest exporter.

Analysis of the European manufacturers who have thus far weathered the gathering storms indicates, as one would expect, that serious commitment to research and development, superior production methods, highly motivated personnel and more highly developed marketing skills pay dividends. These qualities are also those which separate successful Japanese and U.S. companies from unsuccessful ones. For Europeans this "truth" seems to have become less self-evident somewhere along the line.

Bob Raggett is International Editor of Telephony.

A turbulent market place

CONTINUED FROM PAGE 1

excellence. Its capacity for advanced research is considerable, both in universities and in the private sector. Several of its companies have also achieved positions of international strength against fierce competition, largely by their own efforts: for example, Sweden's L. M. Ericsson in public telecommunications and Bosch in automotive electronics.

However, much of its industry appears increasingly vulnerable in a sector where survival increasingly requires huge production scales which can only be achieved on truly global markets. The British Government warned earlier this month that the two largest UK telecommunications companies, Plessey and GEC, could only survive by seeking out much bigger international markets.

While their national markets remain fragmented by discriminatory procurement, elaborate customs procedures and incompatible standards, it is hard for many of Europe's companies to find the necessary scale on their own doorsteps.

Many are increasingly pinning their hopes for future expansion on efforts to penetrate overseas markets, notably the U.S. Dr Wisse Dekker, chairman of Philips, has warned angrily that unless Europe makes decisive strides to remove its internal barriers, many multinational companies may pack up their bags and leave.

However, the mote may in some cases also lie in the eye of the beholder. Some companies, while calling publicly for more rapid European integration and open competition, appear conspicuously reluctant to take any steps which might jeopardise their own privileged positions in home markets where they enjoy protection and government favours.

Dr Carlo de Denedetti, chairman of Olivetti, believes that many European electronics companies also exaggerate the importance of intra-European barriers. He accuses them of looking for "alibis" and argues that the real problems lie with managements which lack entrepreneurial flair and deliberately shy away from risk.

More diplomatically, M Jean-Claude Paye, secretary general of the OECD, observes: "To be very polite about it, some of our entrepreneurs and companies could be more entrepreneurial. It is a form a structural rigidity to have companies which do not change."

In any event, growing worldwide competition is likely to make it increasingly hard for electronics industries everywhere to grow fast without taking higher risks. Some European companies are starting to square up to the challenge by boldly seizing new opportunities for expansion.

The rewards are undoubtedly there to be had. But to stay the course in today's turbulent and volatile markets will require clear business objectives, persistence and a cool nerve.

A greater technical push for industry

Electronics industry in Scotland: computer memory storage devices being assembled in the "clean room" at Rodime's plant at Glenrothes, Fife

Applications

BORIS SEDACCA

AMONG the developed countries of the world, Europe's problems in applying micro-electronics technology to offices and factories are not unique, but somehow the combination of these problems have militated against it.

Trade unions, bureaucracy, geographical fragmentation of markets, and a host of other factors have all taken their toll, not to mention the wide differences in government between the European member states, all of which have different ideas about the extent to which they should be involved in directing the development of their information technology industries.

As the European Community moves on from economic harmonisation to political union, the European Commision is beginning to take a more active and aggressive role in shaping Europe's future in the field of micro-electronics.

The most important example, the European Strategic programme for Research and Development in Information Technology (Esprit) is intended to complement national information technology projects. The aim of Esprit is to give a technological push to industry in the EEC that will enable it at least to catch up with U.S. and Japanese industry within the next 10 years.

The central "enabling technologies" of Esprit are micro-electronics, advanced information processing and software technology.

The specific areas for application are office automation and computer integrated manufacturing.

Last year, the commission committed some 200m European Currency Units (ECUs) to over 100 Eseprit projects. This sum was to be matched by the industrial participants in the programme.

New plans

Ninety of those projects were newly launched in July, 1984, and were selected by independent experts out of a toal of 441 proposals put forward earlier that year, representing a total funding requirement of nearly 1.9bn ECUs for 1984 alone, as compared with the total of 1.5bn ECUs agreed for the first five years (1984-88) of Esprit's main phase.

To be considered as a project, project partnerships have to be formed grouping at least two "pre-competitive" industrial research facilities from different member states.

While research and development have been the initial focus of Esprit, it is now clear that the programme forms part of a broader strategic plan for market development of the European electronics and information technology industries.

The reason Europe needs Esprit, say its proponents, is that quite obviously, individual national projects have failed. Esprit is seen by the Commission as a test case for the Community's industrial development as it shifts away from agricultural issues.

But before Pan European projects such as Esprit can become effective, there are still many nationalistic barriers to be broken down, and nowhere is this more evident than in the national telecommunications monopolies, the PTTs. There can be no effective office automation in Europe without telecommunications to provide the basic infrastructure.

Two years ago, a campaign to expose the Conference of European Posts and Tellecommunications (CEPT) as a price-fixing cartel was launched by the European Computing Services Association (ECSA).

Benefits

Mr Doug Eyeions, director general of the Computing Services Association in the UK, argues that although telecommunications have benefited from advances in microelectronics and satellite technology, prices have not dropped accordingly.

Mr Eyeions claims that the high costs imposed by the PTTs are a form of tariff barrier to international telecommunications, leading to a kind of protectionism which impedes the progress of informatiton technology in Europe.

The CEPT is not a legal entity, he says — "It has no permanent employees, so it is very difficult to get to grips with it, yet it has immense power.

But now at last the EEC is trying to do something about it. For the past couple of years, it has been spurred on by Viscount Etienne Davignon, the former vice-president of the Commission who left in January this year. There is now an attempt to get the national PTTs, which together form CEPT in Europe, to be less nationalistic and to aim for harmonisation."

There are really two aspects to this, he says. One is the tariff policy and protectionism which makes Europe very inefficient and costly as a telecommunications entity. It makes it difficult to build up remote business services across Europe.

Mr Eyeions, says that the other aspect is the procurement policy of the PTTs which are some of the biggest purchasers in their countries. The PTTs tend to buy entirely from their own indigenous suppliers, and therefore European suppliers do not have the large bases to operate from like the Americans and the Japanese do.

"Davignon tried to get them to open up at least 10 per cent of their procurement, but even that is having a rough passage," he adds. "Until he '80s, it was felt that the EEC had no power over the PTTs, that you had to go through the national governments to get to the PTTs, and that the Treaty of Rome did not really apply to the PTTs because they are national bodies, rather than private bodies.

He believes that this is now giving way and, if it is felt that there is a restriction on trade, even if it is a national PTT, the EEC should be able to force them to do something about it. There is the famous telex case of about two years ago when British Telecom was found to be in violation of the Treaty of Rome when it tried to clamp down on a telex forwarding service.

"BT was liberalised but not privatised at that stage. I do not think many of them are going to be liberalised yet. There is some softening, but the Bundespost in Germany, for instance, is still pretty rigid."

He suggests that the present mood in the EEC is that the electronics industry has no chance in Europe if the highways for data — that is telecommunications channels — are not liberalised — "this time you have the national governments on the side of the EEC, from the Prime Ministers down, supporting the EEC initiatives."

Even when Europe's PTTs agree to work together, there is still the delicate issue of standards to be resolved and much behind-the-scenes haggling still takes place on numerous topics.

Mr Paul Shimmel, technical director of Microscope, a company which specialises in videotex equipment, comments: "Every PTT's new videotex Gateway is another system's roadblock."

Instead of providing the opportunity for all to receive the power and possibility of a new Lingua Franca in data communications, "we have seen the creation of a Tower of Babel," he says.

"I hope that within these systems we can take a planned and European attitude to our standards and compromise our positions to produce inter-networking standards that are both acceptable and, more importantly, practically implementable by all."

There are groups whose self-interests parallel this requirement—the private players, the multinational companies and the major computer companies, he believes.

"The groups who are working to some degree against this interest are the very members of the Consultative Committee for International Telephony and Telegraphy (CCITT) themselves, the PTTs, not because they are trying to be awkward but because their own interests are each different and their decisions are purely taken on a national basis.

It must not be forgotten, says Mr Shimmel, that CEPT only defines the presentation layer of the terminal standard, does nothing for inter-networking, and at best, "will only serve to drive a further wedge into the inter-networking area.

"It should attempt to encourage, first conformity and then a staged evolution of stanwards that will meet the demands of an ever evolving set of terminal standards," he adds.

The question now is whether the PTTs will be able to shake off their past and lead by example.

Manpower needs

CONTINUED FROM PAGE 4

—"only then will the status of engineering be lifted, attracting an increasing number of young people to enter the profession," he adds.

There are some promising signs, however. Just as national service in West Germany now provides a nursery for engineering training, so, too, can military service in Britain's armed forces. For example, Computer-aid Services, another maintenance company, has signed a contract with the UK Defence Ministry's Number Two Resettlement Centre at Aldershot to take part in the "Microprocessors and Microcomputers in Engineering" course, run by the centre.

Mr Bernard Pearcey, head of the centre's engineering department, comments "We decided upon a third-party maintenance company because, after surveying the market, the service side is the part of the industry in which there is still much growth to come."

The first two weeks of the course will cover subjects such as basic transistor theory, number systems and codes, basic logic elements, memory addressing and de-coding, the 6800 microprocessor and programming.

Courses are open to all ranks from private to general, providing they pass a pre-course assessment and have served a suitable length of time to be eligible for resettlement training.

In examining the question of electronics education in Europe, the situation in Ireland is of particular interest. An increasing number of international electronics groups are moving to Ireland for both expansion and for skilled staff.

Reports show that per 1,000 head of population, Ireland has twice as many electronics engineers as the UK, (a figure expected to be 2¼ times by 1988). It also has twice as many computer science graduates per 1,000 head of population as the U.S.

But where should the educational change in attitude begin? as far as the UK is concerned, Mr Ian Thompson-Bell, a senior consultant with the advanced electronics group of PA Technology, suggests that the proper combination of correctly skilled engineers working in a stimulating, commercial, results-orientated environment is the only way to re-establish the UK, in particular, as leader in the development of new products.

He adds: "Those in universities and industry who are responsible for training and education facilities for new and established engineers need to answer two questions: Are we providing enough suitably-trained engineers? And are we using them effectively? I believe the answer is 'no' in both cases."

To answer the first question, he says there is a need to know what an engineer's knowledge requirements are in order to function effectively. Today's engineers need more than the detailed grounding in theory and analysis currently provided. They must be given a stronger grasp of design principles, provided in a practical way to make them more aware of real-word design problems.

The most powerful reasons for this approach are that engineers will spend their working lives designing products which should be manufacturable in volume, safe to use, reliable and profitable. Theory does not train them to achieve this.

Training engineers in this way will go some way towards ensuring they are used properly, he believes. But engineers also need to be given more commercial motivation. They need to be taught the significance of their work, their own cost and of timescales, an idea of the marketability of products upon which they are working and how they will be manufactured.

To fail to provide this information leads to expensive, protracted developments of products which appear in the wrong market, at the wrong time—and the wrong price.

"In order to make the best of these changes, industry must then give its engineers true project responsibility," he says.

Economic necessities bring a greater measure of collaboration between centres of academic research and the electronics industry

More university link-ups

Research projects

DAVID MARSH

THE GAP between the European electronics industry and academic researchers has grown more narrow as both sides see the benefits of a closer partnership.

"Universities show far more interest in collaboration than they did 10 years ago," comment Dr Nico Hazewindus, director of corporate product development at Philips, the Dutch electronics multinational.

Part of the reason for this *change in approach is sheer* economic necessity. As public funds for research have grown tighter in many European countries, university workers see more need to attract funds in the shape of sponsored research from companies to continue the operation of academic departments.

Motivation

For their part, companies have paid more attention to creating .mechanisms to tap useful results from the academic world. The motivation for this *is*, first, that companies in electronics and computing find more and more that pure research done in universities in areas such as semiconductor materials, advanced programming and novel computer architectures (the arrangement *of circuits inside a machine*) is relevant to products that they want to take to the market place.

Second, the cost and complexity of much of today's computing research is such that only companies in the premier division of the world's electronics industry — these are mainly American companies such as IBM, Xerox and AT&T —can afford the facilities to do the work themselves.

For those further down the league table — which means even the biggest European companies, such as Olivetti, GEC and Philips — the most practicable option is to turn for such pure research to the leading university laboratories and set up collaborative ventures.

ICL of Britain three years ago created University Re*search Council, funded with* £500,000 a year, to cement contacts with leading computing departments in academia.

The cash has sponsored individual research projects and paid for a series of seminars at which academic people and ICL staff can *discuss subjects of* common interest.

By this mechanism, Mr Mike Watson, technical director of ICL, says his company has struck up useful links with universities such as Oxford, Cambridge, Manchester, Kent, Stirling and Edinburgh and London's Imperial College.

Such efforts do not always proceed entirely smoothly. Some leading academics in computing, at least in Britain, sometimes find it hard to disguise that they feel their own intellectual abilities are far above what the average researcher in industry has to offer.

For their part, the companies may become frustrated at what they see as the leisurely attitude to research shown by some university departments which is out of step with industry's more urgent requirements regarding the development of products.

These difficulties notwithstanding, the closer links between industry and academia are illustrated by the rash of moves all over Europe to set up science parks and innovation centres in which companies (both established firms and fledgling enterprises perhaps started by academics themselves) can work alongside each other.

In West Germany alone, during the past year or so, about 50 towns or regions have set up or announced ventures of this kind, normally linked with an academic institute. West Berlin, for example, has a thriving innovation centre set up a little over a year ago in which small firms in areas such as computing, electronics and robots operate in premises rented by the city's Technical University. Nixdorf, one of Germany's leading computer companies, has also decided to set up premises on the site.

Pioneers

In Britain, Newcastle University took a pioneering step six years ago in setting up the Microelectronics Applications Research Institute (MARI) which acts as a bridge between the university's computing department and the world of industry. MARI is an indepen*dent research organisation with* four members—the university, Newcastle polytechnic, Tyne and Wear County Council, and CAP (the software company).

The institute has annual sales of £1.4m and frequently calls upon people from the university or polytechnic to act as consultants in projects that it undertakes for industry. MARI is probably best known for its marketing of a product originally developed at the university's computing department and sold as "the Newcastle connection." It is a software protocol, which, *for example, is used in some* Honeywell, Burroughs and ICL computers and which provides for interconnection between these machines and other items of hardware made by different manufacturers.

Dr Ken Gray, director of research at Britain's Thorn EMI, advances another reason for the stronger coupling between companies and academic institutes—the fact that such links make it easier for the commercial orga- [illegible] to employ talented people.

. . . . electronics scientists and engineers in short supply all over Europe, the average graduate in these disciplines can afford to pick and choose when it comes to taking a job.

Those companies that have managed to form a strong relationship with the department in which the graduate has taken his degree will stand a better chance of persuading the most sought-after students to accept job offers.

"The future of Thorn EMI relies on us forming close relationships with universities which will enable us to recruit," *says Dr Gray. "The life blood* of high-technology companies is youth. Recruitment of new people is vital and it's very competitive."

This philosophy is one reason Thorn EMI has created the post of chief scientist, which will be filled this autumn by Professor Gareth Robert, an expert in thin-film molecular electronics who is currently at Durham University.

Prof Roberts will spend a day a week at a new laboratory that Thorn EMI is creating at Oxford University, which the company will sponsor with £500,000 over five years. The laboratory will investigate fundamental problems in physics and chemistry which could have relevance in the long term to Thorn EMI product development.

The British company already has a close connection with Newcastle University, with which it has worked on the design of a new generation of sensors based on microchips that can detect small quantities of gases and liquids in, for example, samples of blood or urine in medical applications.

British motor engineers research aspects of surface geometry of future cars at the design centre of Austin Rover

Boost for joint ventures

Industrial collaboration

PETER MARSH

COLLABORATION in research has become a vogue phrase in the European electronics industry in the past few years.

Led by the continent's big electronics companies such as GEC in Britain, Bull in France and West Germany's Siemens, the industry has realised that to stand a chance of competing against the U.S. and Japan it must pool some of its ideas in the research stage of the development of new products.

The most visible sign of this philosophy is the Esprit programme, a research project initiated by officials at the European Commission and taken up mostly with enthusiasm by industry leaders themselves.

Under the programme, which started last year, the European Commission is to hand out research grants totalling 750m European Currency Units (ECUs) (about £470m) to clubs of companies and academic institutes in the EEC's 10 nations.

The clubs—which must include at least two industrial partners from different countries —work together on what is called precompetitive research on the understanding that they put into the projects sums equivalent to the grant from the commission.

Esprit is split into five areas: microelectronics, software, information processing, office systems and computerised manufacturing techniques. The first batch of 104 projects, announced in January, brought together 265 companies, universities and research institutions working with European Commission grants totalling 180m Ecus.

Europe's big 12 electronics companies — GEC, ICL and Plessey of Britain; Siemens, AEG and Nixdorf of Germany; Thomson, Bull and CGE of France; the Dutch Philips and STET and Olivetti of Italy—*dominate the list of participants* in the projects. Companies with fewer than 500 employees are represented, however, in half the projects while universities appear in three quarters.

A second round of grants, totalling up to 215m Ecus, is due to be awarded by the summer, with more cash to come in following years until the total allocated to the programme is consumed.

In Britain, the Government's Alvey programme, which started two years ago, is attempting something similar to Esprit only on a narrower scale.

The Alvey scheme,, financed by the Department of Trade and Industry, Ministry of Defence and Science and Engineering Research Council, has £200m to spend on four areas of computing research: knowledge-based systems, techniques to make it easier for people to communicate with machines; software engineering and new chip-design and production methods.

Of the total cash (which under the plan is being added to by contributions from indus*try of £150m) about 80 per cent* has been committed. The four technology areas emphasised by the Alvey project, in addition to being narrowly defined, miss out *on* one key area related to computing—telecommunications.

Impressive

The Alvey programme is aimed solely at research, with development of products left to the participants to decide on after the research phase is over. Nonetheless, the programme has succeeded in bringing together an impressive number of companies and research institutes to work in partnerships.

"The programme can't be anything other than a success," says Mr Oscar Roith, the chief scientist and engineer at the Department of Trade and Industry.

'Even if the research turns out to be less successful than we might hope, the project will have brought together people to form common views and initiated the development of a culture in Britain in information technology."

Spurred on by similar sentiments, companies have taken their own steps to start collaborative arrangements in research. Bull, Siemens and ICL have operated for the past year a joint research centre in Munich, staffed by 40 scientists and engineers, who are working on new generations of computers.

Philips and Siemens began two years ago to swap information in areas of pure research such as chemistry, physics and electronics design. The collaboration recently branched out with the start of a joint project between the two companies to develop by 1990 a set of new microchips containing up to 4m circuit elements on one piece of semiconductor using novel techniques in very large scale integration.

In telecommunications, CIT Alcatel of France, Siemens, Plessey and Italtel of Italy have collaborated in research targetted at new exchanges and transmission techniques.

The positive aspects of the new collaborative arrangements chiefly concern the extra options that companies are given by pooling ideas.

GEC, for instance, is working under an Esprit project with Thomson and Siemens on new techniques cvonnected with the metallisation processes in the final stages of the manufacture of mircochips.

Under the programme, separate sets of researchers look at different areas of research and compare notes as they go along.

It's a way of taking a more exhaustive view of the possi*bilities," says Dr Cyril Hilsum*, GEC's chief scientist. "You are effectively a mupch larger research group working on projects bigger than an individual company could cope with."

Companies and universities can also share out the use of very expensive instruments that may cost £1m or more used in analysis or prototype production. An indiviual laboratory might find it difficult to justify the purchase of such hardware for its own use solely.

The big question marks about the collaborative research schemes concern their lack of direct relevance to the areas *everyone agrees are the most* vital for Europe's electronics companies—produtc development and marketing.

The general hope is that based on the rapport which companies and individual scientists strike up during the research phase, alliances will become established to tackle the equally difficult and, ultithe sales of products in the mately, vital areas regarding the sales of products in the world market.

"Precompetitive research can be defined simply as anything *that companies choose to col*laborate on," says Mr Mike Watson, technical director of ICL. "There is no way that we are going to spend that money (the cash ICL has put into Esprit) unless we think we will get something out of it. In most projects, the understanding is that one of the possible options after the precompetitive work is joint development."

The evolution from research to product development may, in some cases, be impeded by alliances—in the marketing, not research, area—that companies have already formed with non-European partners. For instance, Philips has an agreement in telecommunications exchanges with AT & T of the U.S.

Any discussions by Olivetti about joint development of research ideas that come out of Esprit may be torpedoed by the 25 per cent stake the same American company is due to take in it over the next few years.

Collaboration

A plan by the European Commission to promote collaboration in telecommunications research — the so-called RACE programme that is still under discussion by European ministers — would bring together companies such as British Telecom and Siemens that in export markets are deadly rivals.

Dr Nico Hazewindus, director of product development and co-ordination at Philips, admits that commercial considerations could impede the degree to which companies get together in RACE. He says that in the Esprit programme some collaborative research agreements have not gone ahead because of worries by potential partners that these might mean they form alliances with companies that are competitors.

Dr Ken Gray, director of research at Thorn EMI, the British electronics group, says of the Alvey programme that its aims are laudable. But he says that the idea of collaborating on precompetitive research is not particularly appealing to consumer-electronics companies such as his.

Thorn EMI takes the view that the value of such programmes is diminished because they lead quickly to competitive areas of work in which any thought of participation with industrial competitors must end.

New courses to meet skilled manpower demand

Education and training

KEVIN TOWNSEND

EDUCATION is the foundation upon which Europe's social structures are built. In Britain, many have traditionally believed in education for education's sake.

In contrast to other countries in Europe, the attitude in the UK towards business, commerce and industry is often that it is a necessary evil.

The British Government, amid a chorus of protest from *some educational institutions*, is seeking to change this. It seeks to link industry to education. Critics claim it is just another way of arguing for cuts: the effect, however, will be to give industry a greater say in the subjects taught at schools and colleges.

Eventually, national necessity, rather than social status, will dictate the syllabus. But this does not solve the basic problem of today, caused by an underlying social stigma against the engineer.

It would not be correct, however, to suggest that continental Europe is a haven for engineers. Mr Bill Moir, engineering director of the computer maintenance company, SMS International, comments: "The attitude towards electronics engineering as a profession is hampered by social stigma. It is undoubtedly true that the UK and French societies do not look favourably upon engineering as a desirable profession. Teenagers are steered towards traditional professions, suoh as law and accountancy, where a clean, superior image prevails.

"West Germany does not have the same outlook. The social status of electronics engineers is on a par with other professions, and engineering qualifications are as greatly valued," he says.

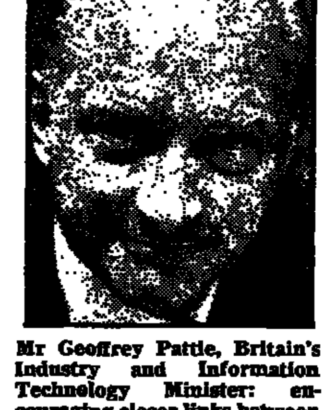
Belgium has a similarly healthy atitude towards its engineers.

Dr David Boyes, an engineering manager with PA Technology in Belgium, comments: "Engineering education in continental Europe attracts the best people at all levels and technically, has tremendously successful results.

"As a result, post-college, on-the-job training is the best there is—doing responsible work.

"What we do not see — and this is true for most Europeans —is the materialism, business sense, call it what you want, that characterises the U.S. and Japan.

"If we can get *that* into at least the engineers, then the future looks good. One method might be to give engineers more



Mr Geoffrey Pattie, Britain's Industry and Information Technology Minister: encouraging closer links between electronic industries and education

business exposure earlier in their careers."

Attitudes

Mr Moir believes that the narrow attitude towards engineering stems back to the classroom. Although microcomputers are being used increasingly in schools, thus alerting children's awareness of *technology, the emphasis is* placed on operation, not assembly.

French students, in particular, who show an aptitude towards engineering in secondary schools, have little available in further education to train them to required standards.

The National Institute Economic Review claims that an important reason for West Germany's lead over the UK is that German schools give a better foundation for work-skills training to most children.

German technical colleges are widely respected and thus attract students of high calibre. The country's National Service system also provides experience in guided weapons, which, in turn, gives certain young people some good grounding for computer engineering. The French and British Governments could well look to the West German Government which has encouraged close collaboration between the academic and electronics sectors, suggests Mr Moir.

"The Government must play a more active role in ecouraging the exchange of views between schools, colleges and employers," he concludes.

Greater incentives are also needed to encourage both external and internal training organisations to be established

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Electronics in Europe 7

Some of the glamour is wearing off

Britain

JASON CRISP

BRITAIN'S ELECTRONICS companies are having to learn to ride the roller-coaster of City opinion. After a period of glamour and bullish enthusiasm, the electronics sector is now in the *dog-house.*

Problems and disappointing results from the major companies like Plessey, STC, Thorn EMI and Racal have been behind the disenchanment. Adding to the general sense of gloom has been a number of crisis at some of the once high-flying new microelectronics groups such as Sinclair Research and Acorn Computers.

Microfocus, a glamorous fast growing software company, suffered most from the adverse swing in sentiment. It saw its share price more than halved—from 740p to 300p—in a single day after reporting lower profits following problems in the U.S. market.

Key factors

There are a number of themes which underly the weakness of the sector which do not apply to all the companies, but nor do many escape from one or more.

● The depth of the slump in semiconductors which has hit companies worldwide. Although semiconductor production by UK companies is comparatively low and largely confined to specialist niches, most of the major companies are affected.

For example, Inmos, owned by Thorn EMI, a mainstream semiconductor producer, has laid-off staff in the U.S. and is working short-time in Britain. This is the norm for non-Japanese semi-conductor companies. Last month, National Semiconductor announced worldwide lay-offs including some in Scotland. Other British companies with semiconductor production are Plessey, STC, Ferranti and GEC.

● Cancelled or delayed orders for military communications by the Middle Eastern oil-producing countries has hit companies such as Plessey, Racal and STC.

● A tougher, more cost-effective purchasing policy by Britain's Ministry of Defence which will affect Plessey, Racal, GEC and Ferranti.

● A growing uncertainty in the telecommunications business as a result of liberalisation of the UK equipment market and the privatisation of British Telecom.

BT's behaviour since flotation has undoubtedly adversely affected the share prices of companies like Plessey and STC. The two main events this year have been BT's proposed acquisition of 51 per cent of Mitel the Canadian telecommunications manufacturer and the ordering of public exchanges from LM Ericsson.

The main concern about the Mitel deal is that BT will buy an increasing proportion of its private exchanges from the *Canadian company at the* expense of Plessey and GEC. The acquisition also places a question mark over Mitel's relationship with ICL, part of STC, which is the main UK distributor of its new and powerful exchange the SX2000.

While BT's intention to buy a second digital public exchange system was widely known the fact that it placed an order with Thorn-Ericsson, a joint venture between Thorn EMI and LM Ericsson of Sweden, did not help sentiment. The assumption is that STC will not win further orders for TXE4A exchanges, the old equipment currently being installed, and that STC *and GEC may not receive as* many orders as they hoped for System X, the new digital exchanges.

Overall, the move confirms that BT is taking a much tougher line with its suppliers.

● The collapse of the home computer market: British companies have flourished in the home computer business until the beginning of this year. Acorn and Sinclair Research were seen as two of the country's most successful and dynamic entreprenuerial success stores. In the space of five years they reached annual turnovers of around £100m.

This year both have been in deep trouble. Although both have suffered from the weakness of the UK market they have also suffered a number of management problems. Both ended the peak Christmas selling period with over £30m of stocks, enough to last them through to the following autumn. Both hit cash flow problems and had to defer payments to their creditor.

Olivetti rescued Acorn in February, buying a 49.3 per cent stake for £10.4m. But Acorn is still struggling as sales this spring have been significantly lower than last year and as a result the company has been hit by renewed cash flow problems. Acorn's further difficulties coinciding with the similar crisis at Sinclair Research has added to the disenchantment.

Headaches

The problems at the leading home computer supplies have also caused headaches for their suppliers. Both A.B. Electronics and Thorn EMI have had to accept deferred payments.

● The weakness in the business personal computer market. Applied Computer Techniques, the Birmingham based company which makes the Apricot, has to some extent *been tarred with the same* brush as Sinclair and Acorn. But ACT's management and products differ greatly from both. However, ACT's reputation has also been affected by its attempt to break into the potentially lucrative U.S. market through Apricot Inc, a $20m company in which it holds a 20 per cent stake.

The U.S. personal computer market is particularly flat at present. In addition many well-established U.S. companies have failed to succeed in this market. The early signs are that Apricot Inc. is facing a tough time in the U.S.

● The weakening of the previously strong consumer electronics markets. Companies like Thorn EMI have been hit by a fall in demand for items like video cassette recorders after enjoying an unprecedented three year boom. Sales of VCRs in the UK fell from around 2.2m units in 1983 to below 1.5m last year.

Nevertheless, demand for colour TVs remained remarkably strong last year with deliveries to the trade reaching a record 3.56m sets. However, Thorn EMI was hit by the rapid swing to small-screen sets and was left with excess stocks of large TVs.

There is no sign of any immediate relief in any of the various problem areas which are hitting the UK electronics industry. Behind all the *specific* problems there is a growing concern about the fundamental and long term difficulties. These range from availablility of skilled staff to ability of British companies to compete on a world scale.

And earlier this year Cambridge Econometrics predicted that Britain's trade deficit in electronic and electrical engineering products would reach £8.3bn by 1993, more than three times the £2.6bn deficit last year.

Britain is certainly not alone in Europe with its problems in the electronics industry. In many ways, the UK is better off than other countries, not least because it has a thriving entrepreneurial sector in electronics which is expected to thrive in spite of the problems.

● After three good years, the UK home computer market is now weak

European semiconductor shipments

● Figures for 1984 by suppliers in $m

Philips (incl. Signetics)	$546
Texas Instruments	$525
Motorola	$384
Siemens	$280
National Semiconductor	$240
Intel	$225
NEC	$220
Hitachi	$210
Thomson	$210
SGS	$180

● European top-ten: 4 European; 4 U.S.; 2 Japanese

● Worldwide top-ten: 1, European (Philips/Signetics); 5, U.S. (TI, Motorola, National, Intel, AMD); 4, Japanese (Hitachi, NEC, Toshiba, Fujitsu)

Source: Dataquest.

Top European producers

● Semiconductor memory revenues for 1983-84 in $m

	$	%
Inmos	150	157
Siemens	50	72
Thomson	47	63
Stantel	31	19
SGS	25	67
Matra-Harris	19	90
Total	322	93
Top 5, U.S.	1,959	52
Top 5, Japan	2,832	93
Top 10, worldwide	4,791	74

Source: Dataquest.

Fresh mood of realism among manufacturers

Developments in France

DAVID MARSH

THE FRENCH electronics industry is facing up to the future with slightly less self-confidence than in the buoyant days of 1981-82—but with a great deal more realism about the need for international collaboration to survive in an increasingly competitive world.

The euphoria generated after the election of Socialist government in 1981 — which brought in a wide-ranging nationalisation programme including the country's top electronics groups—has now faded.

With the main nationalised groups in this sector—Compagnie Generale de'Electricite, Thomson and Bull—all cutting employment in order to boost competiveness, the Government's earlier visions of creating 200,000 new jobs in electronics by the end of the decade are now no more than a memory.

Instead, an increasingly tough-minded policy has emerged of seeking business prospects abroad. The preoccupation is particularly acute in telecommunications, where French companies are no longer receiving the domestic orders generated by France's dash into digital exchanges from the mid-1970s onwards.

The professional and defence electronics sector has also seen the importance of foreign orders increase as a result of the sluggish domestic economy and cuts in France's own defence budget.

Thomson's financial future has been practically salvaged single-handed by the FFr 35 to FFr 40bn air defence deal from Saudi Arabia, won by a Thomson-led consortium last year. And international sales of aircraft and defence equipment are proving of increasing value to France's "club" of high-performing aerospace electronics groups.

Big government-engineered electronics projects still have their place. For example, the Minitel home videotex system, pioneered and financed by the Posts and Telecommunications Ministry, is now in operation to the tune of about 700,000 terminals, with the number planned to double next year as the service is spread around the country.

France's prowess in videotex —with 1,000 different services in operation, it claims the world lead in this field—has benefited not only the terminal manufacturers but also software companies (led by Cap Gemini Sogeti and Sesa for the Minitel). And it is giving France good opportunities for winning export orders, with the PTT's computer services subsidiary Telesystems chalking up initial contracts in the U.S. and Japan in recent months.

France's 20-year-long commitment to space is also paying off in terms of equipment orders connected with the Ariane space rocket and satellites. France is in the middle of an exciting period of launching its own domestic Telecom telecommunications spacecraft as well as, over the next year, the Spot satellite for earth observation and TDF-1 for direct television.

Another in the plethora of communications technology projects is an ambitious programme to wire up France with optical fibres by the end of the century—although early orders have not kept up with levels expected when the project was announced in 1982.

Whatever the impetus of government-launched programmes—and there are still question marks over the economics of some of the projects, particular in satellite TV—the industry now realises that its future depends on the commercial market-place.

According to the Consumer Electronics Manufacturers' Association, exports of audio and video equipment last year rose 38 per cent to FFr 2.7bn—although imports (up 13 per cent) were still more than three times as large at FFr 9.2bn.

In the professional electronics sector, where France has traditionally enjoyed a far more healthy trade position, exports last year rose 9 per cent, with orders tripling thanks partly to the overall boom in defence-related deals.

The switch in priorities away from national grand designs towards down-to-earth economics has been reflected in renewed interest in backing small companies in the electronics sector — and also in a spurt of investor interest in high technology companies on the bourse.

A number of electronics and computer groups has recently made their way to the "second market" or unlisted securities sector of the bourse, including Cap Gemini Sogeti in software, Souriau and Electronique Serge Dassault in professional electronics and Ingenico in electronic banking.

The big nationalised groups, meanwhile, have all been declaring improved results. Some, at least, will be clear candidates for successful denationalisation should the Right return to power next year.

Bull narrowed its net losses to FFr 489m last year from FFr 625m in 1983 and FFr 1.35bn in 1982 and hopes to break even this year. Thomson was already at break even point last year after a loss of FFr 1.25bn in 1983 and FFr 2.2bn in 1982.

CGE, the most consistently profitable of all the big groups nationalised in 1982, made group profits of FFr 797m in 1984 after FFr 636m in 1983. Earnings at its telecommunications subsidiary CIT Alcatel fell only slightly in spite of difficulties over stagnating domestic and foreign orders.

CGE will be incorporating into its accounts from this year the results from Thomson-Telecommunications, the loss making holding company set up to pool Thomson's civil telecommunications interests after the CGE/Thomson asset swap agreed in autumn 1983.

In spite of improving results, the nationalised groups remain a drain on increasingly scarce budgetary funds. Thomson, Bull and CGCT, the former subsidiary of ITT of the U.S., will be receiving FFr 2.75bn of public funds this year, down only slightly from 1984.

France is very much playing the European card in efforts to propel international co-operation. CIT Alcatel, after being rebuffed in efforts to win a share of future British Telecom orders, has joined forces with Plessey, Siemens, and Italtel over research into new generation digital exchanges.

Great hopes for the future are set on the joint research centre on artificial intelligence set up by Bull, ICL and Siemens. France hopes its newly proposed Eureka programme will provide further opportunities for co-operation in areas like high powered computers and software.

The percentage of U.S.-written software is increasing steadily.

U.S. imports dominate market

Software supplies

ALAN CANE

PROFESSOR Donald Michie, former head of the machine intelligence research unit at Edinburgh University and now director of the Turing Institute in Glasgow, developed an expert system a few years ago. He named it Expert-Ease.

Expert systems are perhaps the most exciting of the "new generation" software products designed to exploit the power of today's low-cost computer hardware. They compise a computer memory stuffed full of facts gleaned from the experience of a set of recognised experts and a set of rules derived from research in artificial intelligence.

The software makes it easy for users to interrogate the information stored in the computer's memory and get the benefit of the hundreds of man-years of experience stored there.

Expert systems are believed to have massive potential in a wide range of human activities from foreign exchange dealing to car repair, so Professor Michie should have been on to a good thing.

He set up a company Expert Software International in Edinburgh and offered Expert-Ease at £2,000 a copy. He sold around 100 copies in two years which simply was not enough to prevent the company going to the wall.

Professor Michie then licensed Expert-Ease to an aggressive Californian company, Human Edge Software, which repackaged it and offered it at $695. It sold 100 copies in the first week.

Expert-Ease is again available in the UK through Thorn-EMI Computer Software which markets it (at £695) along with other software from the Human Edge range. According to Mr John Forrest of Thorn EMI, it is doing quite well selling chiefly to customers anxious to experiment with expert systems.

This story encapsulates the difficulties facing the European software industry.

There has never been a shortage of high quality ideas. Indeed, some of the most important principles of good software design are of European origin. The new U.S. Department of Defence programming language Ada was developed at CII Honeywell Bull by an international team under the leadership of the Frenchman Jean D. Ichbiah.

Microprogramming, a software concept which imparts to a computer a whole repertoire of abilities not included in its hardware specification, was the brainchild of Professor Maurice Wilkes of Cambridge University.

And Pascal, the innovative programming language on which Ada is based was devised by the Swiss mathematician Nicholas Wirth.

But despite the fact that the ideas are there and that European computer programming is generally first class, the fact remains that an overwhelming percentage of the software used in Europe is American in origin —and the percentage is increasing.

By contrast, there are only a handful of European products which have made any impact in the U.S. Because the language of computing is English, it is not surprising that most are British in origin.

Shadow II, a telecommunications monitor (communications controller) written at Thomas Cook and marketed by the ill-fated company Altergo had some success when IBM's own telecommunications software was less effective.

Business Intelligence Services has sold its Midas banking package steadily throughout the world over the past seven or eight years and Software AG of West Germany has been successful with database software.

The UK company Microfocus has had success in the U.S. with a version of Cobol, the most common business computer programming language, which runs on microcomputers.

But this trickle of successful products hardly bears sensible comparison with the weight of U.S.-written software which dominates computing worldwide at every level—even the most popular games software is usually a copy of an American original.

Most software industry experts agree the problem is the fact that there is not a mass market for software in Europe comparable to that in the U.S.

UK companies tend to sell software written for the UK to UK companies; French software houses sell programs tailed to French market conditions to French companies; West German software houses sell into the West German market; and so on.

Mr Peter Bonfield, ICL's managing director, emphasises that Unix is a major opportunity for European software companies

U.S. companies, if they have a successful product at home, have secure financial and customer bases from which to launch attacks on Europe as a whole.

Very few European computing services companies — even the giants like CAP-Sogeti-Gemini, Thorn, EMI, or CiSi—seem to be able to generate revenues from software sales sufficient to pour finance back into the business in the manner of the U.S. leaders.

And the cost of success is growing yearly, especially in microcomputer software where advertising and marketing is all-important.

So there is much hope for the European industry in world markets.

Most analysts are doubtful that the tide can be turned although all agree that there will always be niches where a bright company with a good idea can make money.

There is always the possibility of the emergence of a new standard which would allow all the players to start at something approximating equality.

The magic word in Europe at the moment is Unix, software developed over a decade ago by AT & T's Bell Laboratories to control high-powered minicomputers and simplify the job of programing them.

Now that microcomputers have the sheer raw power and storage capacity to run Unix, it is being increasingly seen as a way out of the stranglehold exerted by the big computer manufacturers on the software world.

Speaking at the European Computer Services Association conference in Dublin only weeks ago, Mr Peter Bonfield, managing director of ICL, the UK-based mainframe manufacturer now a subsidiary of STC, said that Unix represented a major opportunity for European software companies.

He said: "Unix is without doubt the key to the future and a major opportunity for the industry in Europe. It should help rapidly to create the pool of applications users want and let them pick and choose. Genuine multi-vendor choice is the end result. It will also help with the sharper identification of profitable market segments."

It is perhaps significant that just as there is massive enthusiasm for Unix among the European manufacturers, interest in the U.S. among software suppliers is luke-warm or non-existent.

One further opportunity, identified by Mr Peter Cunningham of the consultancy Input, at the same conference, depends on what seems to be a sea change in the U.S. market place.

For some years now, the trend has been to low-cost, off the shelf software packages instead of expensive custom-written software.

It seems that much of this software has remained unused because buyers found it too difficult or too time-consuming to learn.

So the trend now seems to be towards service and product combined, using computer technology to provide help for the troubled user.

He or she could simply telephone for help. The company, using communications technology and perhaps even expert systems could diagnose the trouble and advise on how to solve the problem.

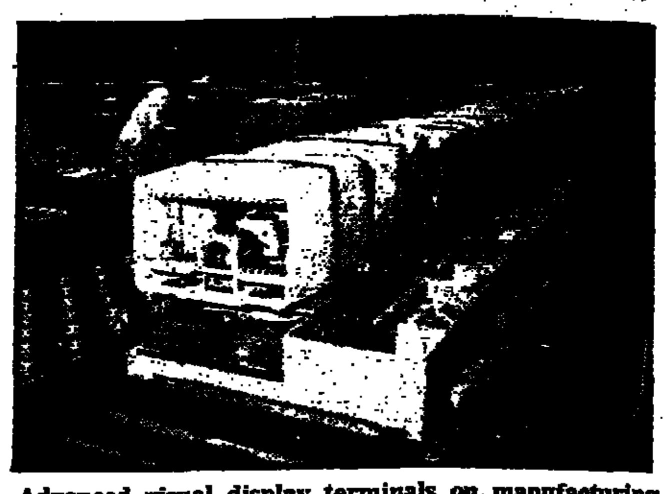
Dr Douglas Eyeions, Director General of the UK Computing Services Association comments: "There is a good chance for European companies if they return to what they are best at —providing a service."

Western European computing services vendors

(worldwide revenues—1984—$m)

	Revenue outside Europe	Western European revenue	Worldwide revenue
CAP Gemini Sogeti	46.3	126.2	172.5
Thorn EMI*	36.8	68.1	104.9
CISI	34.0	138.7	172.7
Seicon Int.†	32.4	105.9	138.3
Sema	30.6	84.6	115.2
SESA	16.8	63.2	80.0
Micro Focus	16.1	4.5	20.6
SG2	15.0	135.6	150.6
Sodeteg-Tai	14.3	16.8	31.1
Logica	9.4	39.6	49.0
CiSi	8.4	160.8	169.2
CAP Group	8.3	27.0	35.3
TITN	6.9	32.4	39.3
SDL	5.9	33.6	39.5
BIS	5.8	14.3	20.1

* Includes Datasolve and Software Sciences.
† Includes SC division in the U.S.
Source: International Data Corporation.



Advanced visual display terminals on manufacturing assembly line at IBM's Greenock, Scotland, plant

Uneasy compromises mark IBM relations with European governments

Europeans take a wary view

IBM strategy

ALAN CANE

IBM likes to think of itself as the well-intentioned suitor in Europe, anxious to play down its foreign origins and take a full role in its adopted family. It is hurt and bemused when European governments treat it with fear and suspicion as if it were the neighbourhood rapist.

For their part, European governments have a schizophrenic attitude tothe world's largest computer company. They are well aware of, and worried by, its political influence and market power, but they cannot ignore its contribution to investment and economic growth in their countries.

So their response to its various initiatives is often an uncomfortable compromise. IBM believed, for example that it should play a part in Esprit, the European Strategic Program on Research and Information Technology, sponsored by the EEC and involving collaboration between many of Europe's major electronics companies including Siemens AG, ICL of the UK and Groupe Bull of France.

The programme has been designed to strengthen Europe's position in advanced computing to counter the threat posed by Japan's own initiative, the "Fifth Generation" computer project.

IBM's keenness to participate was viewed with alarm by Groupe Bull, trading at a loss and reeling from IBM's effective drive into the French computer market.

It tried to persuade the French Government to oppose IBM's participation, but it was unsuccessful. IBM is one of France's largest taxpayers and the Government was unwilling to offend such a sound source of revenue.

But IBM does not have things its own way all the time. In the UK, it was rebuffed when it proposed, in collaboration with British Telecom, the establishment of a "value added netork service" running over BT's telephone lines and controlled by IBM computers.

Value added network services are one of the most important new forms of service which the convergence of computing and telecommunications are making possible.

They comprise virtually any telephone lines other than the service which operates over straighforward carriage of voice teelphone messages. Electronic mail is a VANS, for example.

IBM and BT were proposing to set up a general purpose service; the opposition howled that the combination of two such powerful organisations would create a defacto monopoly before the VANS business in the UK had really taken off, killing off the competition at birth.

The Government agreed and rejected the joint proposal in October last year.

How important is Europe to IBM? It accounted for 26 per cent of its revenues last year and its market share for its various systems compare well with U.S. figures.

For many years, IBM has dominated the world market for commercial mainframe computers—sometimes getting close to a 70 per cent market share. It is beginning to repeat this performance in minicomputers and in personal computers.

In 1984, according to the Paris based company Intelligent Electronics, it took 29.6 per cent of the European personal computer market, ahead of Apple with 16.5 per cent and Olivetti with 7.9 per cent.

The only European companies to make any impression at all on the domination of the Americans were Olivetti and ACT of the UK.

Intelligent Electronics noted: "IBM, although in a strong leading position in the UK market found a worthy competitor in ACT. Its strengths in the larger corporations, however, outweighed any local producer advantage that ACT enjoyed."

UK share

IBM has probably achieved in the UK its highest share of direct sales and has converted to the Personal Computer a vast number of large corporations including the banks. This strength added to the large sales volume which some of their bigger dealers achieved confirmed their strong hold over this market."

Against an IBM freed from the U.S. Justice Department's antitrust suit in 1982 and the EEC's similar action last summer, European computer manufacturers and telecommunications companies have had little choice but to seek protection in strategic alliances and common standards.

Part of the concern over IBM's joint VANS proposal with BT was based on a fear that the company would use its own proprietary networking technique Systems Network Architecture (SNA) to engineer the system.

This, other manufacturers claimed, would put them at a disadvantage in attempting to connect their equipment to an IBM network.

Their hopes are based, therefore, in a world standard for computer communications called Open Systems Interconnect or OSI, a set of rules which defines precisely how one computer systems should be connected to another if they are to pass information efficiently between themselves.

Unfortunately for the European manufacturers (and others including IBM itself) which are backing this OSI standard, the mills of the standards setting bodies grind so exceedingly slow that it will be some years before all the various definitions involved in the standard are fully defined.

In the meantime, European companies anxious to link their computers are copying their U.S. counterparts and settling, willingly or unwillingly, for SNA—"We can't wait any longer for OSI," one data processing manager said.

So worried are governments and companies about SNA when IBM and British Telecom set to work to build the pilot of a cashless shopping systtm (electronic funds transfer at the point of sale or EFT/POS) for the UK clearing banks, they employed a "policeman"—CAP, leading UK computing services company, to ensure that IBM played by the rules in building the computer systems to run the network.

Such uneasy compromises seem certain to mark IBM's continuing relationship with Europe. It finds it difficult to establish joint ventures there, unlike other parts of the world and it finds it hard to be accepted wholeheartedly as the good European it claims to be.

The fact remains that European governments will continue to supp with IBM, albeit with a long spoon. As Stephen McClellan points out in his book *The Coming Computer Industry Shake Out*, "In the world of computers, as in horse racing, there is no such thing as a sure thing."

"But IBM is as close as we are going to get." And Europe knows it.

Risk-taking now less popular

WESTERN EUROPEAN governments are increasingly recognising the importance of venture capital in fostering the growth of young electronics companies.

They have taken their cue from the U.S., where an estimated $3.5bn to $4bn is invested annually by a venture capital industry which has produced world successes like Wang Laboratories, Apple Computer and Hewlett-Packard.

Venture capital

WILL DAWKINS

Their efforts, backed up by the independent growth of private venture capital institutions, have gone a long way to releasing the risk capital that high technology start-up companies so badly need. Yet there is still a widespread shortage of experienced executives prepared to leave safe jobs with large corporations and take a hand in running Europe's fledgling electronics ventures.

That concern was echoed by Mr Robert Ceurvorst, secretary general of the European Venture Capital Association, when he told a conference, earlier this year, that there was still more risk equity available than suitable projects in which to put it.

He estimated that the pool of private venture capital in the European Community had multiplied by up to three times since 1983, when Europe's venture capital groups had raised $1.6bn, of which just $174m was invested.

"The social safety net in Europe has created an environment where risk-taking is [illegible] unattractive," he said.

There are signs that the attitude criticised by Mr Ceurvorst are changing. In Britain alone—Europe's [illegible] source of risk equity—[illegible] 99 specialist venture capital groups invested [illegible]4m last year, a 32 per cent increase on 1983, according to a survey by the UK Venture Capital Journal.

To put that into perspective, however, computer and electronics - related concerns accounted for 27 per cent of the 729 companies to receive backing from UK venture capitalists in 1984, down sharply from 38 per cent of the 578 groups to find venture backing in the previous year. Consumer-related companies, by contrast, jumped from 19 per cent to 21 per cent of the total.

The trend away from investing in high technology is even more marked among Business Expansion Scheme funds. The BES, launched in the 1983 budget, offers tax incentives to individuals investing in unquoted companies, and has provided much of the impetus behind the growth of the UK venture capital industry.

BES funds and open-ended investment schemes invested £49.7m in 306 companies in the 1984-85 tax year, an encouraging increase on the £41.2m invested in 196 group in the preceding 12 months. Yet electronics and computer related businesses took just 11 per cent of the amount invested last year, a dramatic drop from 20 per cent in 1983-84.

Attraction

The figures show clearly that the funds' managers — mostly merchant banks, stockbrokers licensed securities dealers — finds it easier to attract investors to relatively safe asset-backed ventures.

The UK Government moved in the last Budget to correct the balance, by banning property developers from the BES and opening it up to research and development companies.

The increasingly cautious attitude which investors are taking towards high technology concerns only underlines how cyclical the venture capital industry can be.

A sharp decline last summer in the prices of U.S. West Coast electronics stocks quoted on the over-the-counter market — principally caused by investors' earlier over-optimistic valuations — led to a similar, though less dramatic, shake-out for high technology shares on London's Unlisted Securities Market.

New issues of electronics shares on the USM have since noticeably dwindled, suggesting that venture capital backers might find it less easy to realise flotation profits from such concerns in the future.

Meanwhile, the trading problems experienced by companies such as Acorn Computers, Sinclair and Dragon Data have emphasised how quickly a once exciting investment can turn sour.

This does not make it any easier for European Governments to promote venture capital investment in the sector. They range from West Germany's Centre-Right coalition —which has produced a scheme currently being debated in parliament to channel more equity to small and medium-sized businesses—to Socialist France, which recently added legislation to stimulate venture capital to its existing battery of support schemes.

In the Netherlands, the establishment of a government-guaranteed investment scheme in 1981 has pulled in some F178m (£17.7m) for 109 companies, expected to rise to F1125m this year. Like the BES in the UK, the scheme has played an important part in promoting the Dutch venture capital industry as a whole, which accountants Peat Marwick Mitchell estimate is about half the size of the UK industry in terms of the amount of money invested, but twice as large as that of any other Continental country.

Meanwhile, investment in unquoted companies in all sectors has been stimulated by the success of secondary stock markets, led by the establishment of London's Unlisted Securities Market in November 1980 and equivalents in the Netherlands and France. They have provided valuable sources of development finance, but above all opened up a route whereby private venture capital investors can realise their profits by selling shares to the public—barring any swings of sentiment against the electronics sector, like that currently being experienced on the USM.

Public flotations of venture-backed companies are, as yet, rare, but recent UK examples include Sarasota Technology, and the Instem and DPCE computer groups, all of which brought substantial realisation profits for their investors before their sector fell from favour.

European-wide attempts to stimulate venture capital for electronics companies have, however, met with less success. A European Commission proposal for a 100m Ecu (£60m) European Innovation Loan to assist small high technology companies (though not strictly venture capital in the sense that no equity was on offer) failed to win enough support to get off the ground last year.

The UK, in particular, argued that it was inappropriate to channel Community funds into the venture capital industry. The loan would have matched contributions from approved funds and companies on a 1:1 basis.

The Commission's scheme has been shelved indefinitely, but the idea behind it—to encourage joint ventures and exchanges of technology between small companies in different European states—still lives on, in a watered-down form. The Commission is funding a pilot study for a European venture capital fund, conducted by Granville, the London-based licensed securities dealer.

The fund, to be called Euromtech Venture Capital, is expected to be formed towards the end of this year, if all goes to plan, with about £10m of private money available for investment in advanced manufacturing technology.

Finance comparisons by sector

Average size of financing (column A) and average number of investors per financing (column B) for the UK by industry sector for 1981-84

Industry	A (£000)	B
Computer hardware and systems	610	1.62
Software and services	436	1.47
Other electronics	662	1.61
Communications	520	1.85
Genetic engineering	1,138	3.11
Medical/health	955	1.80
Energy	739	1.52
Industrial products	326	1.47

Source: Peat Marwick.

A determined bid to make up lost ground

West German manufacturers

JOHN DAVIES reports from Frankfurt

THE ELECTRONICS business is not for the faint-hearted. The speed of development, the risk and the costs can all be breathtaking. This makes the business all the more of a challenge in a country such as West Germany where, with some notable exceptions, conservatism and caution prevail.

Having fallen behind in electronics, the West Germans have launched a determined bid to catch up with the Americans and Japanese. Government and industry are trying to force the pace of research and to speed up the commercial application of electronics.

But the nature of the effort and some of the problems involved are highlighted by current preoccupations of Siemens, the country's largest private enterprise employer.

On the one hand, Siemens is pressing ahead with plans to produce more advanced semiconductors and is readily increasing its investment spending on the project. However, it has been preparing for short-time working at its newly-expanded factory at Villach in Austria, because of the current state of the notoriously roller-coaster market for components.

Moving with speed and determination that have surprised many people inside and outside the company, Siemens is well on schedule with its plans for a new semiconductor plant at Regensburg in Bavaria.

Production, due to start in 1987, is to include one-megabit dynamic random access memory chips capable of storing more than 1m bits of data.

Siemens is only too aware that it is likely to be behind the Japanese in bringing such chips to the market. But it hopes to narrow the competitive gap when it begins production of a four-megabit chip at Ravensburg in 1989.

With renewed emphasis on European co-operation, Siemens is working closely with Philips of the Netherlands in development work for the so-called "megaproject." Both companies are receiving substantial aid from their respective governments. To boost its research in this area, Siemens is extending its development centre at Perlach in Munich.

Siemens originally spoke of investment of well over DM 1bn on its megaproject, but has since revised its spending upwards. Only a few months ago, the whole project was estimated to cost Siemens DM 2.2bn, consisting of DM 1.4bn on investment and DM 800m on research. But investment now is put at DM 1.7bn and the total cost at DM 2.5bn.

The Regensburg plant was originally expected to cost DM 330m. But at a recent ceremony on the construction site, a Siemens executive said the company in fact would spend as much as DM 540m on it.

Strategy

Under Dr Karl-Heinz Kaske as its chief executive, Siemens has embarked on the megaproject as part of a strategy of focusing on growth-oriented business for the next decade. It has singled out such areas as office electronics, public communications networks and factory automation as major growth areas. It aims to be independent of outside suppliers for the advanced semiconductors required as building blocks in the development of major new products.

But the risks associated with Siemens' ambitions should not be underestimated. The financial outlay on major electronics projects is necessarily high, and the time available to exploit them is relatively short, before they are overtaken by new developments.

Current market problems—in line with the upsets in semiconductor and computer markets in the U.S.—are generally viewed as short-term. It is ironic, however, that Siemens' plant at Villach in Austria has been preparing for short-time working by more than 500 of its 1,400 employees.

While short-time working is envisaged initially for about three months, it might extend to the end of the year. Villach was expended recently at a cost of DM 214m and series production of 256-k chips got underway around the beginning of the year. Until then, Siemens had been producing 64-k chips.

In its electronics components business, Siemens depends not only on its own in-house market but to a large extent on outside markets.

Overall, the company's electronic components division supplies three-quarters of all its production to the open market and the remaining quarter to its own operations. Even for in-house marketing, the company wants to avoid being a "protected nature reserve" for its electronic components division and aims at competitiveness with outside suppliers.

The West German resolve to catch up in electronics has been spurred along by the Federal Government, particularly by Dr Heinz Piesenhuber, the Science and Technology Minister.

The Government has brought in a programme to spend DM 2.9bn on research aid for information technology between 1984 and 1988. This includes DM600m for sub-micron semiconductor research, but Siemens says it is not yet clear exactly how much it will get from this sum.

The Government has also been trying to encourage the use of electronics in traditional industry, including the many small and medium-sized businesses that abound in West Germany. There is evidence that mechanical engineering and other industries are responding to this challenge and laying the groundwork for stronger international competitiveness.

Among motor vehicle manufacturers and automotive component suppliers, electronics operations have been developing strongly. There is considerable interest in such techniques as electronic direction finders, such as the so-called FVA project being developed by Blaupunkt with federal government support.

The consequences of lagging behind in electronics are only too clear from the consumer electronics industry. Faced with powerful Japanese competition, Grundig has come under the management control of Philips and faces further restructuring and job losses to ensure its survival.

Telefunken, now in the hands of Thomson of France, is currently battling with the West German cartel authorities for the right to continue an agency-type distribution system which has helped its profitability.

AEG, one of the traditionally proud names of German electrical engineering, sold Telefunken to Thomson as part of its slimming down process in the wake of its financial troubles. Since meeting the terms of its court-supervised debt settlement agreement, AEG under Herr Heinz Duerr has been enhancing its technological position and building up its financial fortunes.

Steady path

In data processing, Nixdorf remains firmly on the path of expansion and by 1987 expects to have doubled its 1983 sales revenue of DM 2.7bn. It is expanding production capacity at Paderborn, Bray in Ireland and Singapore, and has steadily built up its distribution network internationally.

It has also expressed interest in possibly joining in semiconductor development and has held talks with RCA and LSI Logic of the U.S. LSI Logic recently decided to build a plant to make custom chips in Brunswick (where Toshiba of Japan already makes semiconductors).

Nixdorf has moved increasingly into the field of telecommunications, and Herr Heinz Nixdorf, the founder and company head, recently voiced his impatience with the Bundespost, the postal and telecommunications authority. He is a stern critic of the Bundespost's monopolistic influence and has also pressed for more rapid digitalisation of the telecommunications system.

The Bundespost is currently under review by a committee of inquiry to see whether it is matching up to demands on it in the present era of fast-changing technology.

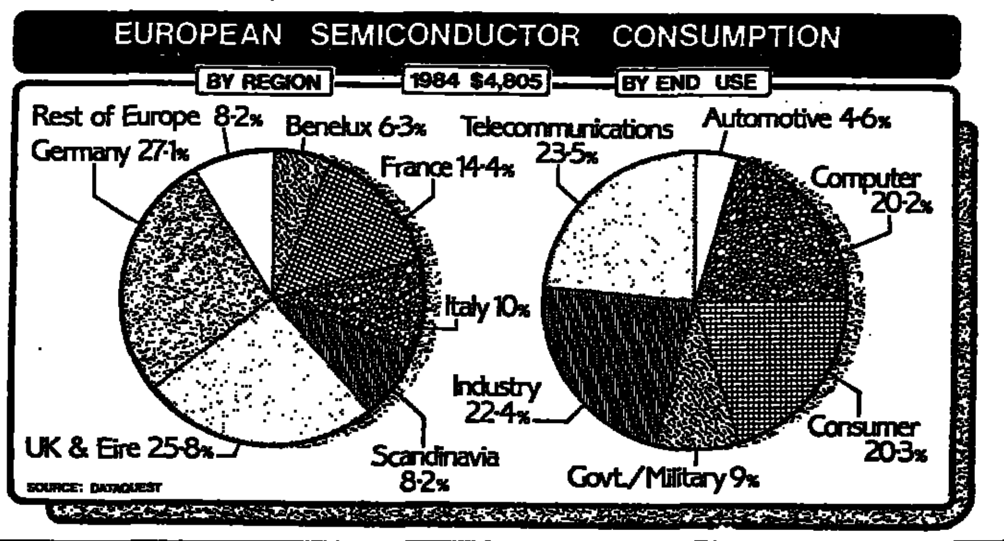
With the merging of computer and telecommunications technologies, office equipment companies such as Triumph-Adler have been seeking to extend their interests further into data transmission. TA has streamlined its production of electronic typewriters and electronic components in the past few years.

More recently, it has its computer range and has built up a network of distribution and advisory centres in major cities for its computers and office systems.

TA, owned by Volkswagen, aims at a substantial reduction in losses this year, particularly now that its Pertec office computer operations in the U.S. have been hived off to Volkswagen of America.

TA aims to produce about 750,000 electronic typewriters from its Frankfurt and Berlin factories this year, compared with 531,000 last year and 395,000 in 1983. It claims to have won more than 30 per cent of the electronic typewriter market in West Germany and 20 per cent of the U.S. market.

Olivetti is now the foremost European-controlled maker of data-processing equipment. Above: M20 computers on the assembly line at Olivetti's Scarmango plant at Ivrea.



Olivetti is the star of the industry

Advances in Italy

JAMES BUXTON reports from Rome

ITALY has what is, by European standards, a relatively successful medium-sized electronics industry. It has a reasonable though declining, trade surplus in electronic products. It has several companies which are, in different fields, among the Continent's leaders. And it has a population that shows itself able to adapt surprisingly quickly to technological change.

The successes of the industry are due almost entirely to individual companies, not to co-ordinated action by the Government. This means that where government initiatives are essential but lacking, as in the field of data transmission networks, there is a gap. The relatively low level of national spending on research and development also raises doubts as to how far the Italian industry can ever be a European leader.

The star of the Italian electronics industry is undoubtedly Olivetti. It is now the Continent's foremost European-controlled data processing equipment-maker, with sales [illegible]

It is also one of the more pro- [illegible] Europe, and one of the highest-earning companies, in absolute terms, in Italy.

Olivetti has transformed itself very quickly indeed over the past five years from what being predominantly a maker of mechanical and electro-mechanical office equipment. It has made use of a solid management base, with an excellent tradition of marketing, and has cleverly obtained know-how by acquisition of stakes in high-technology companies.

It has gained market shares in Europe, thanks in part to acquisition, and in late 1983 made a major agreement with AT&T of the U.S., whereby AT&T took 25 per cent of Olivetti and Olivetti obtained a major outlet for its M24 personal computer in the U.S.

Intention

The declared aim of Sig Carlo De Benedetti, Olivetti's luminous chairman and chief executive, who is undoubtedly Italy's most dynamic businessman, is to make Olivetti the credible European alternative to IBM. How far the company succeeds in fulfilling that ambition depends on its continuing ability to generate technological advances—especially in the field of software, on the success of its products in the U.S. market and on the acquisition of know-how from its U.S. partner, which has the right to take 40 per cent of Olivetti in 1988.

Whereas other European countries, Britain for example, have several major companies in the field of data processing equipment, Olivetti is the only Italian-owned manufacturer of its kind in the country. The Italian market for personal professional computers is now growing very fast, after a fairly slow start earlier in the decade.

In 1984 the number of professional personal computers sold, more than doubled from 38,500 to 90,000 units. According to the PGP Market Research organisation, IBM accounted for about 30 per cent of the market, Olivetti won 23 per cent and Apple about the same share.

According to ANIE, the Electronics Industry Association, Italian output of data processing equipment (which includes that of IBM Italia, whose total sales last year were L3,651bn) was L3,479bn, of which 59 per cent was exported. It was, by a short head, the biggest single sector in the Italian electronics industry.

The second biggest was telecommunications, with total output worth L3,358bn — but exports of only 12 per cent of that. The Italian telecommunications industry was a major victim of Government inattention in the 1970s. The manufacturers were hit by a dearth of orders from the Ministry of Posts and from SIP, the main utilities, and the Italian telecommunications system slipped badly behind those of other European countries.

The foundations of a recovery were only laid in 1981 when the Utilities were allowed to raise charges substantially and the main domestically-owned manufacturer, Sit - Siemens, was refounded as Italtel, and put under new management, led by Sra, Marisa Bellisario.

It concluded an agreement with GTE of the U.S. and Telettra, the telecommunications offshoot of the Fiat group, to develop and manufacture a new family of digital exchanges, named Protel. The first exchanges of this type are now being installed.

Italtel is now a healthy company. It made profits both in 1983 and 1984—when it had sales of L1,129bn. Some 85 per cent of its sales revenue is from the sale of public telecommunications equipment. The bulk of [illegible] the Italian state-controlled Utilities.

Italtel has taken a lead in getting European manufacturers of switching equipment to standardise certain parts of their digital exchanges. Siemens, Cit Alcatel and Plessey have all signed an agreement, though it could go further.

Given the underdeveloped state of digital switching in Italy, the Italian Government does not intend to open up the domestic switching market to companies that are not already represented in Italy. Those are Italtel and the subsidiaries of Ericsson and ITT.

The growth of telecommunications in Italy should get a boost in due course from two developments. One is the completion, early next year, of Itapac, a packet switching network for data transmission. At one stage it looked as if SIP, the state-controlled telecommunications utility which will manage the system, might form a joint venture to develop it with IBM or Olivetti. Now it looks more likely that agreements will be made with several different equipment suppliers for the value added networks connected to Itapac.

The other development is the forthcoming presentation of a draft law which would streamline the extraordinarily cumbersome structure of Italian telecommunications, transferring most powers from the ministry of posts to two companies, SIP and Italcable.

This simplification, when it comes, should make Italian telecommunications more efficient and increase the market for equipment and services.

The third sector of the Italian electronics industry is the sector of electronic systems: the application of electronics to such uses as defence equipment, machine tools, postal sorting equipment and other equipment. This sector had turnover of L2,075bn in 1984, of which 46.5 per cent was accounted for by exports.

About 56 per cent of the sales of this sector are in the field of defence equipment. One of the major companies is Ragruppamento Selenia Elsag (RSE), which designs and builds radar, missile systems, space equipment, electronic factory automation equipment, postal sorting machinery and other products. Contraves, the Italian offshoot of the Swiss concern, Oerlikon Buehrle, makes electronic equipment for detection of hostile forces, and weapons systems for defence of war ships against missiles.

Elettronica, in which Plessey of the U.S. last year took a stake, is Italy's leading company in the field of electronic warfare—the detection or deceiving of enemy forces by means of electronics.

Italy has no less than five companies designing and building flexible manufacturing systems (FMS), electronicaly controlled factory systems. The companies are led by Fiat's subsidiary, Comau, which has recently completed the world's most comprehensively automated plant for making car engines at Termoli in south-east Italy, and has equipped the car assembly plants of Fiat Auto. The other companies in the sector are Olivetti's OCN (Olivetti Controlleo Numerico), Mandelli, Saimp, which is part of the state-owned ENI Group, and Elsag, part of RSE.

The existence of several companies in this field shows not only how the traditionally strong Italian machine tools industry has advanced into completely new fields, but also that a large market exists in Italy for factory automation equipment.

Factors

This is not just because of the strength of the Italian motor industry—but because of two factors: the high cost of labour, which make automation attractive, and the readiness of Italian managers to innovate, skipping a technological generation in the process if necessary.

In the field of systems electronics, as in other sectors of the electronics indsutry, alliances are being formed to achieve economies of scale and exchange knowhow. Apart from Plessey's buying into Elettronica—which it will eventualy come to control—Selenia has agreed to collaborate in the defence field with the British company Racal, and last year IBM Italia launched a joint venture with Elsag in the field of factory automation — IBM's first joint venture with a European company.

Ambitious plans for rationalisation of the factory automation equipment sector have so far come to nothing. Last summer there was serious talk of collaborative agreements being made between RSE and Comua, and between RSE and Olivetti Controllo Numerico, but nothing has happened between RSE and Comau, while earlier this year Olivetti announced that after nine months of talks it had been unable to reach an agreement between RSE and its own subsidiary.

Snags follow over-rapid growth

The Nordic Countries

DAVID BROWN in Stockholm

SCANDINAVIA'S largest electronics manufacturer is starting to feel the bite of industry giants in the increasingly competitive global personal computer and office automation market led by U.S. and Japanese manufacturers.

L. M. Ericsson, with annual sales of SKr 29.4bn and a worldwide workforce of 75,000, surprised analysts last year with a sharp drop in profitability after having predicted a 20 per cent rise in earnings from the SKr 1.76bn reached in 1983.

Results plummeted 10.7 per cent to SKr 1.57bn, due to heavy losses in its strategically crucial information systems business area which forced a major management shake-up.

Public telecommunications, the traditional core of the Ericsson empire, still generates 87 per cent of the group's profit despite intense efforts to quickly transform the company into a more broadly based electronics supplier.

Ericsson has a 15 per cent world market share with its axe digital telephone switching technology, and has recently won a number of crucial new orders.

Significantly, these were won in collaboration with other manufacturers. They include a £100m contract for British Telecom (together with Thorn EMI in the Thorn-Ericsson joint venture) and another deal worth some Fl 240m to supply the Dutch telecommunication system through its joint venture with American Telephone and Telegraph and Philips.

But the move into office automation has been fraught with troubles. Ericsson had hoped that its strength in digital switching technology, coupled with its advanced private branch exchange (PBX) would give it a foot in the door of an estimated $3.6bn world market.

But the PBX project was hit by component shortages and production snags last year, and the information systems unit plunged to an SKr 217m operating loss compared with profits of SKr 237m in 1983.

Many analysts attribute last year's problems to the group's over-rapid growth; its acquisition of the Datasaab terminals manufacturer in 1981 and the Facit office equipment company in 1982 coincided with heavy development spending on the PBX, a new bank terminal system and a personal computer. The breadth of the product range overstretched both management and financial resources.

Moreover, the group has been forced to invest some SKr 4.5bn in fixed assets in an effort to remain technologically competitive with the industry giants. Yet it has had trouble passing on these higher costs in the competitive market-place.

The information systems division has been reorganised under a new management, and a major rationalisation scheme based on concentrating product and marketing programmes has been instituted. These are expected to show results "during the latter part of the current year," says the company.

Among these moves, Ericsson has slowed its efforts to sell data terminals and personal computers on the U.S. market and has concentrated more heavily on the European. It has also disposed of its two power cable operations in North America.

Meanwhile, the group has introduced its new IBM-compatible personal portable computer, and an Alfaskop 91 work-station. Ericsson already claims a 17 per cent European share of the terminals market, and continues to make substantial progress marketing mobile telephone systems.

Challenge

The Nordic regions' second major force in the electronics sector is Nokia of Finland, the industrial conglomerate which is the country's largest privately-held company with annual sales of FMk 9.4bn and a workforce of 28,000.

The group has seen turnover in its electronics division climb 10-fold in the past decade to an annual $300m. It is the largest microcomputer maker in Scandinavia, helped by its acquisition last year of Luxor and Salora.

Nokia's research and development spending makes up 17 per cent of turnover, with most of this being channelled into the electronics division where sales are expected to climb as much as 50 per cent this year.

According to Mr Timmo Koski, the unit's new president, the major challenge facing the group is to balance the need to achieve a competitive size against the difficulties of rationalising and managing its fast growth.

With heavy international competition, he says, the key to future expansion lies in international acquisitions and co-operation pacts. Like other Nordic manufacturers, the bulk of the group's sales are generated on foreign markets.

Most recently, Nokia entered a joint venture with the Tandy Corporation of the U.S. and the two companies have started production in South Korea of mobile cellular radio handsets.

It has also signed a four-year agreement to deliver terminals and workstations to Northern Telecom for an office system being marketed in Europe.

The group's Mobira radio telephone unit failed last year to meet production targets and was said to have played an important role in the 15 per cent decline in group net profits to FMk 85.5m, but significant growth is forecast for 1985.

Norsk Data of Norway, meanwhile, has shown a strong development with 1984 pre-tax profits climbing 60 per cent to NKr 230m on sales of NKr 1.36bn. Paradoxically, the group complains that its high R and D spending has kept margins from jumping ahead to nearly 16 per cent.

The group has steered clear from the highly competitive personal computer market, and focused instead on military and office equipment sectors where it offers complete systems with integrated software.